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     (FILE 'HOME' ENTERED AT 11:35:39 ON 21 MAR 2002)

     FILE 'HCAPLUS' ENTERED AT 11:35:55 ON 21 MAR 2002
L1           228 S THOMSON B?/AU
L2          2196 S ALI S?/AU
L3             5 S MEDCALF N?/AU
L4             8 S MALTMAN J?/AU
L5             0 S MALTMAN S?/AU
L6          2434 S L1-4
L7             2 S L6 AND DRESSING
                 SELECT RN L7 1

     FILE 'REGISTRY' ENTERED AT 11:42:25 ON 21 MAR 2002
L8            19 S E1-19

     FILE 'HCAPLUS' ENTERED AT 11:43:40 ON 21 MAR 2002
L9         277593 S L8
L10           374 S L9(L) DRESSING
L11           156 S L9(L)WOUND DRESSING
L12         50264 S HEPARIN OR INOSITOL PHOSPHATE OR FUCOIDIN OR SYNDECAN OR .BET
L13             8 S L11 AND L12
L14        120300 S POLYCATION? OR POLYPEPTIDE
L15             2 S L13 AND L14
L16             6 S L13 NOT L15
L17            14 S L10 AND (KERATINOCYTE OR FIBROBLAST)
L18             4 S L12 AND L17
L19          2835 S L12(P) (KERATINOCYTE OR FIBROBLAST)
L20             4 S L19 (P)WOUND DRESSING
L21             4 S L19 (P)DRESSING
L22             5 S L19  AND DRESSING
L23             3 S L22 NOT L16
L24           181 S L19(L)L14
L25             0 S L24 AND DRESSING
L26            20 S L24 AND WOUND
L27            20 S L26 NOT (L16 OR L22)
L28             7 S L19(L)POLYLYS?
L29           467 (POLYLYS? OR L14)(5A)(LAYER? OR COATING)
L30             0 S L29 AND L11
L31           156 S L10 AND L11
L32             8 S L31 AND L12
L33             2 S L32 AND  (KERATINOCYTE OR FIBROBLAST)
L34          3277 S  (POLYLYS? OR L14)(5A)(LAYER? OR COATING OR GEL OR HYDROGEL O
L35            51 S L34 AND L12
L36             6 S L35 AND (KERATINOCYTE OR FIBROBLAST)

     FILE 'USPATFULL' ENTERED AT 12:23:13 ON 21 MAR 2002
L37         18288 S KERATINOCYTE OR FIBROBLAST
L38          1926 S  (POLYLYS? OR L14)(5A)(LAYER? OR COATING OR GEL OR HYDROGEL O
L39         19953 S HEPARIN OR INOSITOL PHOSPHATE OR FUCOIDIN OR SYNDECAN OR .BET
L40            22 S L37(P)L38
L41             2 S L40(P)L39
L42             0 S L41 AND DRESSING
L43           255 S L37 AND L38 AND L39
L44            30 S L43 AND WOUND DRESSING
L45            21 S L44 AND REVERS?
L46           944 S L37(P)L39
L47            58 S L46 AND L38
L48            14 S L47 AND DRESSING
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L49	9	S	L47 AND BANDAGE
L50	15	S	L48-49
L51	726467	S	MODULAT? OR REVERS?
L52	14	S	L50 AND L51

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L7 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:42596 HCAPLUS
DOCUMENT NUMBER: 130:115061
TITLE: Wound **dressing** comprising a biodegradable cell anchoring layer
INVENTOR(S): **Thomson, Brian Mark; Ali, Saad Abdul Majeed; Medcalf, Nicholas; Maltman, John**; Winter, Sharon Dawn
PATENT ASSIGNEE(S): Smith & Nephew Plc, UK
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9900151	A2	19990107	WO 1998-GB1882	19980626
WO 9900151	A3	19990325		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9882245	A1	19990119	AU 1998-82245	19980626
EP 989866	A2	20000405	EP 1998-932298	19980626
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002507908	T2	20020312	JP 1999-505386	19980626

PRIORITY APPLN. INFO.:
GB 1997-13406 A 19970626
GB 1997-25209 A 19971128
WO 1998-GB1882 W 19980626

AB A wound **dressing** which comprises a carrier layer having a non-adherent to cell layer on a wound facing surface thereof is disclosed. The non-adherent layer has bonded thereto a biodegradable cell anchoring layer which anchors mammalian cells. In use, the degradable layer breaks down releasing the cells into the wound site which are discouraged from reattaching to the **dressing** by the non-adherent layer. Thus, the **dressing** can switch from a cell binding state to a state in which the binding of cells is discouraged. Systems, methods of treatment and methods of manufg. the **dressing** are also disclosed. Opsit IV 3000 polyurethane film was exposed to nitrogen plasma and promptly covered with a thin coat of a soln. contg. 20% ethylene glycol diglycidyl ether (I) and 1% CM-cellulose (II). An aq. soln. of 10 mg/mL-heparin was then sprayed on top of I:II acting and the resulting material was dried at 60.degree. for 5 h, then it was sterilized and stored dry. The above film was immersed in fetal calf serum and a suspension of human keratinocytes. Cells adhered to the film within 4-16 h. Following subsequent in vitro culture, the cells detached from the film and were released into the medium.

IC ICM A61L015-00
CC 63-7 (Pharmaceuticals)
ST wound **dressing** biodegradable polymer animal cell
IT Proteoglycans, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(perlecans; wound **dressing** comprising biodegradable cell anchoring layer)

IT Polyethers, biological studies
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyamide-; wound **dressing** comprising biodegradable cell anchoring layer)

IT Polyethers, biological studies
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyester-; wound **dressing** comprising biodegradable cell anchoring layer)

IT Polyamides, biological studies
Polyesters, biological studies
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polyether-; wound **dressing** comprising biodegradable cell anchoring layer)

IT Transforming growth factor .beta. receptors
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(type III; wound **dressing** comprising biodegradable cell anchoring layer)

IT Animal cells
Autotransplant
Culture media
Dressings (medical)
Fibroblast
Keratinocyte
Polyvalent anions
(wound **dressing** comprising biodegradable cell anchoring layer)

IT Fluoropolymers, biological studies
Polyoxyalkylenes, biological studies
Polysiloxanes, biological studies
Polyurethanes, biological studies
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(wound **dressing** comprising biodegradable cell anchoring layer)

IT Pentosans
Peptides, biological studies
Proteins (general), biological studies
Syndecans
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(wound **dressing** comprising biodegradable cell anchoring layer)

IT 107-73-3, Phosphocholine 868-77-9 9002-84-0, Ptfe 9003-01-4, Polyacrylic acid 9003-05-8 24937-78-8, Ethylene vinyl acetate copolymer 25322-68-3
RL: DEV (Device component use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(wound **dressing** comprising biodegradable cell anchoring layer)

IT 9002-89-5D, Polyvinyl alcohol, hydroxyalkyl derivs. 9004-34-6D, Cellulose, hydroxyalkyl derivs. 9004-67-5, Methyl cellulose 9005-49-6, Heparin, biological studies 9012-36-6, Agarose 9042-14-2, Dextransulfate 9072-19-9, Fucoidin 25104-18-1, Polylysine 25191-25-7, Polyvinyl sulfate 38000-06-5, Polylysine 68247-19-8, Inositol phosphate 119684-05-8, Mesoglycan

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L16 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:689255 HCAPLUS
DOCUMENT NUMBER: 129:281053
TITLE: Wound dressings containing active substances
INVENTOR(S): Woessner, Werner; Oswald, Ute; Meister, Frank; Hueckel, Marion; Mueller, Peter-Juergen; Buehler, Konrad; Taplick, Thomas
PATENT ASSIGNEE(S): Thueringisches Institut fuer Textil- und Kunststoff-Forschung e.V., Germany; Hans Knoell Institut fuer Naturstoff-Forschung e.V.; GWE Gesellschaft fuer Wissenschaft und Entwicklung m.b.H.; Gothaplast Verbandpflasterfabrik G.m.b.H.
SOURCE: Ger. Offen., 6 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19712699	A1	19981001	DE 1997-19712699	19970326
DE 19712699	C2	20000525		

AB A wound plaster consists of an adhesive-coated backing layer, an overlay comprising a dried polysaccharide gel contg. medicinally active substances and excipients, and a removable release liner. The polysaccharide gel is dried by microwave irradn., optionally with the aid of heated gases and/or IR irradn.; this method provides homogeneous drying, without degrdn. of the active agents, to a film which does not have the spongy, mech. weak structure of freeze-dried polysaccharide films. Thus, a mixt. of hyaluronic acid (mol. wt. 1.5 .times. 106) 2, glycerin 2, p-hydroxybenzoic acid 0.06, and distd. water 95.94 parts was continuously applied to the Teflon-coated belt of a film-casting machine and passed through a 6 m-long, 25-kW microwave tunnel at 35 m/h with a countercurrent stream of air at 40-50.degree. to produce a film 240 .mu.m thick. This plasticized hyaluronic acid film was scraped off and layered onto a band of cotton fabric (180 g/m2) at 50.degree.; the fabric band was then placed in the middle of a strip of adhesive-coated backing material and covered with detachable polypropylene film.

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L16 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2002 ACS
IC ICM A61L015-28
ICS A61F013-02; A61L015-44; A61F017-00; A61K038-17; C08L005-00
CC 63-7 (Pharmaceuticals)
ST wound adhesive dressing polysaccharide gel; hyaluronate gel drug medical dressing
IT Medical goods
(absorbents; wound dressings contg. active substances)
IT Lipids, biological studies
Proteins (specific proteins and subclasses)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(complexes, with hyaluronic acid; wound dressings contg. active substances)
IT IR radiation

Microwave
(drying with; wound dressings contg. active substances)
IT Polysaccharides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gels; wound dressings contg. active substances)
IT Gases
(heated, drying with; wound dressings contg. active substances)
IT Absorbents
(medical; wound dressings contg. active substances)
IT Peptide complexes
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(with hyaluronic acid; wound dressings contg. active substances)
IT Anti-inflammatory drugs
Antioxidants
Binders
Blister
Cotton fabrics
Disinfectants
Dressings (medical)
Drugs
Drying
Emulsifying agents
Fabrics
Hydrocolloids
Hydrogels
Liposomes (drug delivery systems)
Permeation enhancers
Plasticizers
Preservatives
Thickening agents
Wound
(wound dressings contg. active substances)
IT Lymphokines
Vitamins
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(wound dressings contg. active substances)
IT Glycosaminoglycans, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(wound dressings contg. active substances)
IT 50-81-7, L-Ascorbic acid, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antioxidant; wound dressings contg. active substances)
IT 55-56-1D, Chlorhexidine, compds. with glucose 1837-57-6, Ethacridine lactate
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(disinfectant; wound dressings contg. active substances)
IT 260-94-6D, Acridine, derivs. 65431-33-6D, Trypaflavine, derivs.
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(dyes; wound dressings contg. active substances)
IT 56-81-5, 1,2,3-Propanetriol, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(plasticizer; wound dressings contg. active substances)
IT 110-44-1, Sorbic acid
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preservative; wound dressings contg. active substances)
IT 99-96-7D, esters

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preservatives; wound dressings contg. active substances)

IT 50-99-7D, D-Glucose, compds. with chlorhexidine 79-83-4, Pantothenic acid
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(wound dressings contg. active substances)

IT 62-49-7D, Choline, complexes with hyaluronic acid 1398-61-4, Chitin 9000-01-5, Gum arabic 9000-07-1, Carrageenan 9000-30-0, Guar gum 9000-40-2, Locust bean gum 9000-65-1, Gum tragacanth 9000-69-5, Pectin 9002-18-0, Agar 9004-32-4 9004-54-0, Dextran, biological studies 9004-61-9, Hyaluronic acid 9004-61-9D, Hyaluronic acid, derivs. 9004-61-9D, Hyaluronic acid, esters 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid **9005-49-6, Heparin,** biological studies 9007-27-6, Chondroitin 9012-76-4, Chitosan 9050-67-3, Schizophyllan 9057-02-7, Pullulan 9067-32-7, Sodium hyaluronate 11138-66-2, Xanthan gum 39300-88-4, Tara gum 54724-00-4, Curdlan 69992-87-6, Keratan 71010-52-1, Gellan gum 73613-05-5, Fenugreek gum 75634-40-1, Dermatan 96949-21-2, Rhamsan gum 96949-22-3, Welan gum 111744-92-4, Benzyl hyaluronate 111745-19-8, Ethyl hyaluronate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**wound dressings** contg. active substances)

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L16 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:725353 HCAPLUS
DOCUMENT NUMBER: 126:51022
TITLE: Gel-forming system for use as wound dressings
INVENTOR(S): Fox, Adrian S.; Allen, Amy E.
PATENT ASSIGNEE(S): Nepera, Inc., USA
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5578661	A	19961126	US 1994-221159	19940331

AB A gel-forming system comprising an aq. mixt. of a first component of at least one water-sol. polymer in an amt. sufficient to increase the initial viscosity of the mixt. and impart adhesion properties thereto; a second component of an acid-contg. polymer; a third component of an amino-contg. polymer; and water. This system has a pH 5.5-8.5 and the second and third components are each present in sufficient amts. which, in combination, increase the cohesiveness of the mixt. over time, such that the mixt. can be initially combined in a relatively fluid state and subsequently forms a cohesive gel structure. This system is useful as a wound dressing for deep wound cavities because the gel protects the wound and permits healing, does not interfere with new tissue growth or development, is capable of absorbing significant amts. of wound exudate, and has sufficient cohesive strength for subsequent removal from the cavity as an integral plug without interrupting the healing process. For example, a gel-forming compn. contained ethylene-maleic anhydride copolymer 0.5, N,O-carboxymethyl chitosan 2.5, PVP 10, polyethylene oxide 0.5, and NaOH 0.16 %.

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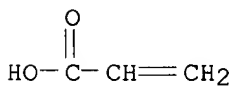
L16 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2002 ACS
IT **9003-01-4**, Polyacrylic acid **9005-49-6**, **Heparin**
, biological studies **25104-18-1**, Poly(L-lysine)
25322-68-3, Polyethylene oxide **38000-06-5**,
Poly(L-lysine)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gel-forming system for use as **wound dressings**)
RN 9003-01-4 HCAPLUS
CN 2-Propenoic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7
CMF C3 H4 O2



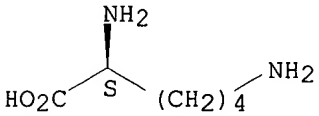
RN 9005-49-6 HCAPLUS
CN Heparin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 25104-18-1 HCAPLUS
CN L-Lysine, homopolymer (9CI) (CA INDEX NAME)

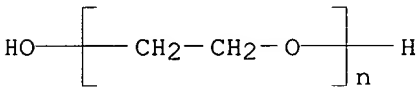
CM 1

CRN 56-87-1
CMF C6 H14 N2 O2
CDES 5:L

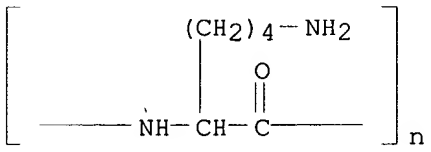
Absolute stereochemistry.



RN 25322-68-3 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy- (9CI) (CA INDEX NAME)



RN 38000-06-5 HCAPLUS
CN Poly[imino[(1S)-1-(4-aminobutyl)-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)



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L16 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2002 ACS
IC ICM C08L005-00
ICS C08L039-06; C08L071-02
NCL 524027000
CC 63-7 (Pharmaceuticals)
ST wound dressing gel polymer mixt
IT Dressings (medical)
Electrolytes
(gel-forming system for use as wound dressings)
IT Glycosaminoglycans, biological studies
Peptides, biological studies
Platelet-derived growth factors
Polysaccharides, biological studies
Transforming growth factor .beta.1
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gel-forming system for use as wound dressings)
IT 526-95-4D, Gluconic acid, derivs. 9000-07-1, Carrageenan 9002-18-0, Agar **9003-01-4**, Polyacrylic acid 9003-39-8, PVP 9004-61-9, Hyaluronic acid 9005-32-7, Alginic acid **9005-49-6**, **Heparin**, biological studies 9006-26-2, Ethylene-maleic anhydride copolymer 9011-16-9, Maleic anhydride-methyl vinyl ether copolymer 9012-76-4, Chitosan **25104-18-1**, Poly(L-lysine) **25322-68-3**, Polyethylene oxide 28062-44-4, Acrylic acid-vinylpyrrolidone copolymer **38000-06-5**, Poly(L-lysine) 62229-50-9, Epidermal growth factor 83512-85-0, N-Carboxymethylchitosan 107043-88-9, N,O-Carboxymethylchitosan
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gel-forming system for use as **wound dressings**)
IT 56-81-5, Glycerol, biological studies 96-48-0, .gamma.-Butyryl lactone 97-64-3, Ethyl lactate 123-42-2, Diacetone alcohol 872-50-4, N-Methylpyrrolidone, biological studies 2687-91-4, N-Ethylpyrrolidone
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(humectant; gel-forming system for use as wound dressings)

=> d ibib abs 4

L16 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:369827 HCAPLUS
DOCUMENT NUMBER: 125:35743
TITLE: Modified alginate fibers for wound dressings with improved absorbancy
INVENTOR(S): Qin, Yimin; Gilding, Keith Dennis
PATENT ASSIGNEE(S): Innovative Technologies Limited, UK
SOURCE: PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9610106	A1	19960404	WO 1995-GB2284	19950926
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9535306	A1	19960419	AU 1995-35306	19950926
GB 2307687	A1	19970604	GB 1997-6596	19950926
GB 2307687	B2	19990310		
EP 783605	A1	19970716	EP 1995-932127	19950926
R: BE, DE, DK, ES, FR, GB, IT, LU, NL, SE				
JP 10506442	T2	19980623	JP 1995-511498	19950926
US 6080420	A	20000627	US 1997-809686	19970630

PRIORITY APPLN. INFO.:		
GB 1994-19572	A	19940929
GB 1995-1514	A	19950126
GB 1995-16930	A	19950818
WO 1995-GB2284	W	19950926

AB The title fibers are prepd. by spinning aq. solns. contg. 70-95:5-30 (wt. ratio) mixts. of alginates and water-sol. nonalginate polymers [e.g., polysaccharides, poly(carboxyamino acids), poly(acrylic acid), poly(methacrylic acid) or salts thereof] into a coagulating bath. An aq. dope contg. Na alginate (Protanal LF 10/62) 12, CM-cellulose 1.5, and high-methyloxy pectin 1.5 kg was spun at 12 m/min, taken up at 7.2 m/min, drawn 80.degree., washed, dried, crimped, and cut to give staple fibers suitable for nonwoven wound dressings.

=> d ibib abs 5

L16 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:324872 HCAPLUS
DOCUMENT NUMBER: 122:89477
TITLE: Hydrolytically labile cyanogen halide-crosslinked polysaccharide microspheres
INVENTOR(S): Smith, Daniel J.; Chakravarthy, Debashish
PATENT ASSIGNEE(S): University of Akron, USA
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9427647	A1	19941208	WO 1994-US5702	19940519
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5549908	A	19960827	US 1993-65742	19930520

PRIORITY APPLN. INFO.: US 1993-65742 19930520

AB Water swellable and hydrolytically labile (and therefore potentially biodegradable) non-toxic microspheres or beads comprise a polysaccharide (e.g. dextran) crosslinked with a cyanogen halide (e.g. cyanogen bromide) in an aq. alk. medium which is a disperse phase of a water-in-oil dispersion. The microspheres are useful in the treatment of wounds, in particular as an absorptive agent for wound exudates. The microspheres may be formed into a wound dressing which includes a blend of the microspheres and a hydrophobic adhesive matrix material on a waterproof backing sheet.

=> d hitstr ind 5

L16 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2002 ACS
IT **9042-14-2P, Dextran sulfate**
RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(crosslinked; swellable and hydrolytically labile crosslinked polysaccharide microspheres for **wound dressings**)
RN 9042-14-2 HCAPLUS
CN Dextran, hydrogen sulfate (9CI) (CA INDEX NAME)

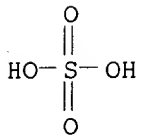
CM 1

CRN 9004-54-0
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 7664-93-9
CMF H2 O4 S



IC ICM A61L015-00
CC 63-6 (Pharmaceuticals)
ST cyanogen halide crosslinking polysaccharide microsphere bead; wound dressing crosslinking polysaccharide microsphere bead
IT Polysaccharides, biological studies
RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(crosslinked; swellable and hydrolytically labile crosslinked polysaccharide microspheres for wound dressings)
IT Crosslinking agents
(cyanogen halides; swellable and hydrolytically labile crosslinked polysaccharide microspheres for wound dressings)
IT Pharmaceutical dosage forms
(beads, swellable and hydrolytically labile crosslinked polysaccharide microspheres for wound dressings)
IT Medical goods
(dressings, swellable and hydrolytically labile crosslinked polysaccharide microspheres for wound dressings)
IT Pharmaceutical dosage forms
(microspheres, swellable and hydrolytically labile crosslinked polysaccharide microspheres for wound dressings)
IT 74-79-3DP, Arginine, grafts with dextran 9004-54-0P, Dextran, biological studies **9042-14-2P, Dextran sulfate**
RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(crosslinked; swellable and hydrolytically labile crosslinked polysaccharide microspheres for **wound dressings**)
IT 506-68-3, Cyanogen bromide
RL: RCT (Reactant)
(crosslinking agent; swellable and hydrolytically labile crosslinked polysaccharide microspheres for wound dressings)

=> d ibib abs 6

L16 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:563976 HCAPLUS
DOCUMENT NUMBER: 121:163976
TITLE: **Heparin**-fibroblast growth factor-fibrin complex: in vitro and in vivo applications to collagen-based materials
AUTHOR(S): DeBlois, Chantal; Cote, Marie-France; Doillon, J.
CORPORATE SOURCE: Laval University, Quebec, PQ, G1L 3L5, Can.
SOURCE: Biomaterials (1994), 15(9), 665-72
CODEN: BIMADU; ISSN: 0142-9612
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Biol. mols. such as fibrin and growth factors could have interesting features to design bioactive biomaterials and particularly collagen-based materials used as connective tissue replacement. Different combinations of fibroblast growth factor (FGF) and **heparin** complexes to fibrin were analyzed. In vitro, FGF bound to matrix was rapidly, but partially released, specifically with **heparin**. **Heparin** concns. were progressively equilibrated between matrix and medium. DNA replication of fibroblasts grown either on or within fibrin matrixes was increased in the presence of both FGF and high doses of **heparin** incorporated in fibrin. S.c. implantations of collagen sponges impregnated with composite fibrin matrixes showed qual. and quant. tissue ingrowth within the sponges. The noncrosslinked collagen of fibrin-impregnated sponges swelled after implantation. The resulting fibroblast-infiltrated tissue resembled a normal dense connective tissue that was obsd. particularly in the presence of high doses of **heparin** and FGF incorporated in fibrin.

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L23 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:638475 HCAPLUS
DOCUMENT NUMBER: 121:238475
TITLE: Supplemented and unsupplemented tissue sealants, methods of their production and use
INVENTOR(S): Nunez, Hernan A.; Drohan, William Nash; Burgess, Wilson Hales; Greisler, Howard P.; Hollinger, Jeffrey O.; Lasa, Carlos I., Jr.; Maciag, Thomas; Macphee, Martin James
PATENT ASSIGNEE(S): American National Red Cross, USA; Loyola University of Chicago; United States Dept. of the Army
SOURCE: PCT Int. Appl., 140 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9420133	A1	19940915	WO 1994-US2708	19940314
W: AU, CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2158134	AA	19940915	CA 1994-2158134	19940314
AU 9463648	A1	19940926	AU 1994-63648	19940314
AU 696691	B2	19980917		
EP 696201	A1	19960214	EP 1994-910927	19940314
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 09502161	T2	19970304	JP 1994-520353	19940314
AU 9884192	A1	19981105	AU 1998-84192	19980911
AU 733471	B2	20010517		

PRIORITY APPLN. INFO.: US 1993-31164 A 19930312
AU 1994-63648 A3 19940314
WO 1994-US2708 W 19940314

AB This invention provides supplemented and unsupplemented tissue sealants (TSs), such as fibrin glue, as well as methods of their prodn. and use. In one embodiment, this invention provides TSs that do not inhibit full thickness skin wound healing. This invention also provides growth factor(s)- and/or drug(s)- supplemented TSs and methods of their prodn. and use. In one embodiment, the TS is supplemented with a growth factor(s) and can be used to promote (1) wound healing, such as that of skin or bone, (2) endothelialization of vascular prostheses, (3) the proliferation and/or differentiation of animal cells, and/or (4) the directed migration of animal cells. Exemplified embodiments include fibrin glue that is supplemented with **fibroblast** growth factors and/or bone morphogenetic proteins and polytetrafluorethylene vascular grafts pressure perfused with fibrin glue contg. **heparin**-binding growth factor-1. In another embodiment the supplemented TS is used to produce a localized delivery of a growth factor(s) and/or a drug(s), such as 5-fluorouracil and tetracycline.

=> d ibib abs hitstr 2

L23 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1993:198118 HCAPLUS
DOCUMENT NUMBER: 118:198118
TITLE: Development of hydrogel-containing stabilized basic fibroblast growth factor for wound treatment
AUTHOR(S): Tefft, J.; Roskos, K. V.; Heller, J.
CORPORATE SOURCE: Controlled Release Biomed. Polym. Dep., SRI Int., Menlo Park, CA, 94025, USA
SOURCE: Proc. Int. Symp. Controlled Release Bioact. Mater., 19th (1992), 371-2. Editor(s): Kopecek, Jindrich. Controlled Release Soc.: Deerfield, Ill.
CODEN: 58JTAJ
DOCUMENT TYPE: Conference
LANGUAGE: English
AB The proposed hydrogel wound **dressing** consists of a collagen-**heparin** matrix integrated into a starch support. This hydrogel also contains a stabilizing **heparin**-basic **fibroblast** growth factor (bFGF) complex where the bFGF remains immobilized within the polymer network until delivery. This hydrogel mimics the manner in which bFGF is stored in an insol. substrate such as the extracellular matrix.

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L23 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2002 ACS
CC 63-7 (Pharmaceuticals)
ST hydrogel fibroblast growth factor wound **dressing**
IT Medical goods
(**dressings**, hydrogels, basic fibroblast growth factor-contg., for wound treatment)
IT 106096-93-9, Basic fibroblast growth factor
RL: BIOL (Biological study)
(**dressing** hydrogels contg., for wound treatment)

=> d ibib abs hitstr 3

L23 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1988:124468 HCAPLUS
DOCUMENT NUMBER: 108:124468
TITLE: The influence of heparin on the wound healing response to collagen implants in vivo
AUTHOR(S): McPherson, John M.; Ledger, Philip W.; Ksander, George; Sawamura, Steven J.; Conti, Annemarie; Kincaid, Steven; Michaeli, Dov; Clark, Richard A. F.
CORPORATE SOURCE: Connect. Tissue Res. Lab., Collagen Corp., Palo Alto, CA, 94303, USA
SOURCE: Collagen Relat. Res. (1988), 8(1), 83-100
CODEN: CREXDV; ISSN: 0174-173X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The biol. response to fibrillar collagen (collagen) and fibrillar collagen plus **heparin** (collagen/**heparin**) implants were compared in the rat s.c. and guinea pig dermal wound models. The reconstituted bovine dermal collagen implants were injected s.c. in rats at concns. ranging from 18 to 30 mg/mL and in vols. ranging from 0.5 to 1.0 mL. The biol. response to the collagen implants alone was characterized by a transient invasion of a modest no. of inflammatory cells within the first 3 days of implantation that was followed by limited **fibroblast** invasion into the peripheral 1/3 of the implant during the course of the next 3 to 4 wk. Occasionally, blood vessels were obsd. to invade the peripheral regions of the implant. The degree (no.) and extent (depth) of cell invasion were inversely related to initial collagen implant concn. Addn. of **heparin** (0.3-20 .mu.g/mg collagen) to these implants resulted in a significant dose-dependent increase in the degree and extent of **fibroblast** invasion. Radiolabeling studies showed that the collagen and collagen/**heparin** implants were cleared from the subcutis at identical rates. Implantation of these formulations in a guinea pig dermal wound model was also performed, using a semi-occlusive wound **dressing** (Opsite) to maintain the implant in the wound site. The fibrillar collagen implant alone was pushed upward by developing granulation tissue at the base of the wound and served as a support for epidermal cell migration, proliferation, and differentiation as wound closure proceeded. The implant was slowly invaded and turned over as granulation tissue developed from the base and margins of the wound bed. The inclusion of **heparin** in these implants resulted in a significantly different pattern of wound healing. The collagen/**heparin** implants histol. presented a more broken-up or porous appearance following implantation, which was assocd. with a greater degree of penetration of developing granulation tissue into the implant itself as compared to the collagen implants. Radiolabeling studies revealed that clearance rates of implants with and without **heparin** from wound sites were similar, as noted in the rat subcutis. Laser doppler flowmetry studies suggested that the **heparin**-contg. implants were more vascular than control wound sites or sites treated with collagen alone.

=> d ibib abs hitstr

L36 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:84615 HCAPLUS
DOCUMENT NUMBER: 136:139888
TITLE: Amphipathic coating for modulating cellular adhesion composition
INVENTOR(S): Zamora, Paul O.; Osaki, Shigemasa; Tsang, Ray
PATENT ASSIGNEE(S): Biosurface Engineering Technologies, Inc., USA
SOURCE: U.S., 16 pp., Cont.-in-part of U.S. Ser. No. 399,119, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6342591	B1	20020129	US 2000-629059	20000731
US 5955588	A	19990921	US 1998-159276	19980922
EP 1159302	A1	20011205	EP 1999-901385	19990108
R: DE, ES, FR, GB, IT, IE				
WO 2002010221	A1	20020207	WO 2001-US24000	20010731
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.:
US 1998-159276 A1 19980922
US 1999-399119 B2 19990920
US 1997-68374P P 19971222
WO 1999-US450 W 19990108
US 2000-629059 A 20000731

AB The present invention provides an anti-thrombogenic and cellular-adhesion coating compn. for blood-contacting surfaces. The coating comprises a covalent complex of 1-30 hydrophobic silyl moieties, directly bound to a **heparin** mol. via covalent bonding, with an adhesive mol. directly bound to the **heparin** mol. In one embodiment, the coating comprises benzyl-(1,2-dimethyl)disilylheparin, wherein an adhesive mol., such as fibronectin, is bound to the **heparin**. Benzylmagnesium chloride was treated serially with chloro(chloromethyl)dimethylsilane to give a benzyl-(1,2dimethyl)disilyl compd. This compd. was modified to form an activated succinimidyl ester that was, in turn, conjugated to **heparin** to form a benzyl-(1,2-dimethyl)disilylheparin. The silyl-**heparin** coating may be applied to any polymeric substrate, either forming a medical or other implantable device, or coated or otherwise forming a surface of a medical or other implantable device.

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L36 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2002 ACS
AB . . . coating compn. for blood-contacting surfaces. The coating

comprises a covalent complex of 1-30 hydrophobic silyl moieties, directly bound to a **heparin** mol. via covalent bonding, with an adhesive mol. directly bound to the **heparin** mol. In one embodiment, the coating comprises benzyl-(1,2-dimethyl)disilylheparin, wherein an adhesive mol., such as fibronectin, is bound to the **heparin**. Benzylmagnesium chloride was treated serially with chloro(chloromethyl)dimethylsilane to give a benzyl-(1,2dimethyl)disilyl compd. This compd. was modified to form an activated succinimidyl ester that was, in turn, conjugated to **heparin** to form a benzyl-(1,2-dimethyl)disilylheparin. The silyl-**heparin** coating may be applied to any polymeric substrate, either forming a medical or other implantable device, or coated or otherwise. . .

ST amphipathic coating cellular adhesion medical device; **heparin** coating medical device benzyldimethysilylmethyl prepn

IT Animal cell
Cell adhesion
Coating materials
Fibroblast
Medical goods
Nerve
Prosthetic materials and Prosthetics
T cell (lymphocyte)
(amphipathic coating for modulating cellular adhesion compn.)

IT 9005-49-6DP, **Heparin**, reaction products with benzylbis(dimethysilylmethyl) deriv. 392298-24-7DP, reaction products with **heparin**
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(amphipathic coating for modulating cellular adhesion compn.)

IT 9002-72-6, Growth hormone 9005-49-6, **Heparin**, biological studies 9042-14-2, **Dextran sulfate** 24937-49-3, Polyornithine 25104-12-5, Polyornithine 25104-18-1, **Polylysine** 38000-06-5, **Polylysine**
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(amphipathic **coating** for modulating cellular adhesion compn.)

=> d ibib abs hitstr 2

L36 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:175701 HCAPLUS
DOCUMENT NUMBER: 132:212734
TITLE: Hydrogel compositions for the controlled release administration of growth factors
INVENTOR(S): Jennings, Robert N., Jr.; Yang, Bing; Protter, Andrew A.; Wang, Yu-Chang John
PATENT ASSIGNEE(S): Scios Inc., USA
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000013710	A2	20000316	WO 1999-US20382	19990903
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9959095	A1	20000327	AU 1999-59095	19990903
EP 1107791	A2	20010620	EP 1999-946759	19990903
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 6331309	B1	20011218	US 1999-390164	19990903

PRIORITY APPLN. INFO.:
US 1998-99168P P 19980904
US 1998-99168 P 19980904
WO 1999-US20382 W 19990903

AB Compns. and methods are disclosed for the controlled release delivery of polypeptide growth factors. The compns. of the invention are **hydrogels** which comprise: a **polypeptide** growth factor having at least one region of pos. charge; a physiol. acceptable water-miscible anionic polymer; a physiol. acceptable nonionic polymeric viscosity controlling agent; and water. An example compn. contained basic **fibroblast** growth factor, 10% polyoxyethylene-polyoxypropylene block copolymer and Na CM-cellulose.

=> d ibib abs hitstr 3

L36 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:709125 HCAPLUS
DOCUMENT NUMBER: 129:332221
TITLE: Multifunctional polymeric tissue coatings, their preparation and use as protective coating or encapsulant
INVENTOR(S): Hubbell, Jeffrey A.; Elbert, Donald L.; Herbert, Curtis B.
PATENT ASSIGNEE(S): California Institute of Technology, USA
SOURCE: PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9847948	A1	19981029	WO 1998-US7590	19980417
W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, GW, HU, ID, IL, IS, JP, KP, KR, LC, LK, LR, LT, MG, MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9871211	A1	19981113	AU 1998-71211	19980417
EP 975691	A1	20000202	EP 1998-918250	19980417
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				

PRIORITY APPLN. INFO.: US 1997-44726P P 19970418
WO 1998-US7590 W 19980417

AB Biocompatible compns. for coating biol. and nonbiol. surfaces (metal), minimize or prevent cell-cell contact and tissue adhesion. Polyethylene glycol/polylysine (PEG/PLL) block or comb-type copolymers with high mol. wt. PLL (>1000, more preferably >100,000); PEG/PLL copolymers in which the PLL is a dendrimer which is attached to 1 end of the PEG; and multilayer compns. including alternating **layers** of **polycationic** and polyanionic materials are prepd. for coating substrates. The mol. wts. are selected such that the PEG portion of the copolymer inhibits cellular interactions, and the PLL portion adheres well to tissues. The compns. inhibit formation of post-surgical adhesions, protect damaged blood vessels from thrombosis and restenosis, and decrease the extent of metastasis of attachment-dependent tumor cells. Polyethylene glycol-polylysine block graft copolymer was used to coat a polystyrene cell culture well showed resistance to cell spread when seeded with human foreskin **fibroblast** cells.

=> d ind 3

L36 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2002 ACS
IC ICM C08G081-00
ICS A61K009-50
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 35, 63
ST polyethylene glycol **polylysine** block graft **coating**;

dendritic polyethylene glycol **polylysine coating**;
cationic polymer multilayer coating; anionic polymer multilayer coating;
tissue protective coating comb polymer; cell adhesion resistance coating

IT Polysaccharides, uses
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(cationic; in multilayer coatings of multifunctional polymeric tissue coatings)

IT Dendritic polymers
RL: PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ethylene oxide-lysine copolymer; multifunctional polymeric tissue coatings)

IT Peptides, uses
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(in multilayer coatings of multifunctional polymeric tissue coatings)

IT Medical goods
(multilayer coatings and multifunctional polymeric tissue coatings for application to)

IT Animal tissue
Blood vessel
(multilayer coatings and multifunctional polymeric tissue coatings for protection of)

IT Tumors (animal)
(multilayer coatings and multifunctional polymeric tissue coatings for resistance to attachment of)

IT Block polymers
Graft polymers
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(of polycationic unit and non-tissue binding unit; multifunctional polymeric tissue coatings)

IT Polyamides, uses
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(poly(amino acids); in multilayer coatings of multifunctional polymeric tissue coatings)

IT Quaternary ammonium compounds, uses
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(polymers; in multilayer coatings of multifunctional polymeric tissue coatings)

IT 110067-85-1, Ethylene oxide-lysine copolymer
RL: PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(dendritic; multifunctional polymeric tissue coatings)

IT 9000-07-1, Carrageenan 9000-21-9, Furcellaran 9000-69-5, Pectin 9002-98-6 9003-01-4, Polyacrylic acid 9004-32-4, Sodium carboxymethyl cellulose 9004-34-6D, Cellulose, oxidized 9004-61-9, Hyaluronic acid 9005-32-7D, Alginic acid, salts 9005-49-6, **Heparin**, uses 9007-28-7, Chondroitin sulfate 9042-14-2, **Dextran sulfate** 9050-30-0, Heparan sulfate 9060-90-6, Poly(aminostyrene) 11138-66-2, Xanthan 24937-47-1, Poly(arginine) 24937-49-3, Poly(ornithine) 24967-94-0, Dermatan sulfate 25087-26-7, Polymethacrylic acid 25104-12-5, Poly(ornithine) 25212-18-4, Poly(arginine) 26062-48-6, Poly(histidine) 26853-89-4, Poly(D-lysine) 26854-81-9, Poly(histidine) 26913-90-6, Poly(D-lysine) 69577-67-9D, Poly(2-aminoacrylic acid), esters 215295-50-4 215295-53-7 215295-55-9 215295-58-2 215295-61-7 215295-64-0 215295-67-3

215295-70-8 215295-73-1
RL: TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(in multilayer coatings of multifunctional polymeric tissue coatings)

IT 215314-09-3, Ethylene oxide-lysine block graft copolymer
RL: PRP (Properties); TEM (Technical or engineered material use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(multifunctional polymeric tissue coatings)

=> d ibib abs hitstr 4

L36 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:245943 HCAPLUS
DOCUMENT NUMBER: 126:313828
TITLE: Characterization of a 50-kDa component of epithelial basement membranes using GDA-J/F3 monoclonal antibody
AUTHOR(S): Gayraud, Barbara; Hopfner, Bianca; Jassim, Ali; Aumailley, Monique; Bruckner-Tuderman, Leena
CORPORATE SOURCE: Institut de Biologie et Chimie des Proteines, CNRS, Lyon, 69367, Fr.
SOURCE: J. Biol. Chem. (1997), 272(14), 9531-9538
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Using the monoclonal antibody GDA-J/F3, a 50-kDa noncollagenous component of human skin basement membrane zone was identified. Immunofluorescence stainings of normal human skin with the GDA-J/F3 antibody showed a linear fluorescence decorating the basement membrane zone. With immunoelectron microscopy, the epitope was localized to the insertion points of the anchoring fibrils into the lamina densa. The antigen is distinct from collagen VII, from the main structural protein of the anchoring fibrils, and from several other structural mols. of the basement membrane zone, because the GDA-J/F3 antibody did not react with purified basement membrane components in vitro. In serum-free cultures, the antigen was synthesized and secreted by normal and transformed human **keratinocytes** and to a lesser extent by normal human skin **fibroblasts**. Immunopptn. of radiolabeled epithelial cell-conditioned medium with the GDA-J/F3 antibody yielded two polypeptides that migrated on SDS-PAGE with apparent mol. masses of 46 and 50 kDa under nonreducing conditions. Using reducing **gels**, only the 50-kDa **polypeptide** was obsd. The antigen was resistant to digestion with bacterial collagenase but sensitive to trypsin and pepsin. It also bound to **heparin** and DEAE cellulose at low ionic strength and alk. pH. These findings indicate that the GDA-J/F3 antigen is a small globular disulfide-bonded protein with a potential to interact with basement membrane proteoglycans. Integration of the GDA-J/F3 antigen into the histoarchitecture of the dermo-epidermal junction is dependent on the presence of collagen VII, because the GDA-J/F3 epitope was missing in several patients with a genetic blistering disorder of the skin, epidermolysis bullosa dystrophica, who lacked collagen VII and anchoring fibrils.

=> d ibib abs hitstr 5

L36 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1990:11911 HCAPLUS
DOCUMENT NUMBER: 112:11911
TITLE: **Gel** formulation containing **polypeptide** growth factors
INVENTOR(S): Finkenaur, Amy L.; Cohen, Jonathan M.; Shalaby, Shalaby W.; Sandoval, Elisabeth A.; Bezwada, Rao S.; Kronenthal, Richard L.
PATENT ASSIGNEE(S): Ethicon, Inc., USA
SOURCE: Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 312208	A1	19890419	EP 1988-308574	19880916
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, LU, NL, SE				
AU 8822235	A1	19890323	AU 1988-22235	19880914
JP 02000112	A2	19900105	JP 1988-232102	19880916
ZA 8806947	A	19900530	ZA 1988-6947	19880916
PRIORITY APPLN. INFO.:			US 1987-98816 A	19870918
			US 1988-233483 A	19880819

AB **Gel** formulations contain **polypeptide** growth factors having human mitogenic or angiogenic activity and water sol. polymers for providing viscosities within various ranges detd. by the application of the gels. These gel formulations are useful for topical or incisional wound healing fur cutaneous wounds, in the anterior chamber of the eye and other ophthalmic wound healing. These formulations provide controlled release and increased contact time of the growth factor to the wound site. Thus, 6.3 g methylparaben, 0.7 g propylparaben, and 177.5 g mannitol was dissolved in 3500 mL water and to this soln. was added 17.5 g powd. poly(acrylic acid) (Carbopol 940) with mixing at 1000 rpm. The soln. was neutralized with 10% NaOH and 900 g resultant gel was removed and autoclaved, followed by addn. of 12 mL sterile EGF (1.18 mg/mL) to give a sterile gel (viscosity 490,000-520,000 cps) contg. 15.6 .mu.g EGF/mL. This gel gave an enhanced rate and quality of sound healing in pig and guinea pig partial thickness skin excision models.

=> d ibib abs hitstr 6

L36 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1983:450861 HCAPLUS
DOCUMENT NUMBER: 99:50861
TITLE: Serum spreading factor (vitronectin) is present at the cell surface and in tissues
AUTHOR(S): Hayman, Edward G.; Pierschbacher, Michael D.; Ohgren, Yvonne; Ruoslahti, Erkki
CORPORATE SOURCE: Cancer Res. Cent., La Jolla Cancer Res. Found., La Jolla, CA, 92037, USA
SOURCE: Proc. Natl. Acad. Sci. U. S. A. (1983), 80(13), 4003-7
CODEN: PNASA6; ISSN: 0027-8424
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Monoclonal antibodies were prepd. against a cell attachment-promoting protein, serum spreading factor, which had been partially purified from human serum by chromatog. on glass bead columns. The antibodies selected were those that reacted with polypeptides that had cell attachment-promoting activity after SDS polyacrylamide gel electrophoresis. Immunochromatog. of human plasma on columns contg. the monoclonal antibodies followed by affinity chromatog. on **heparin** -Sepharose yielded material that in SDS polyacrylamide **gel** electrophoretic anal. gave **polypeptides** of mol. mass 65 and 75 kilodaltons. Both polypeptides bound each of 3 monoclonal antibodies and had cell attachment-promoting activity after transfer to nitrocellulose filters. Immunofluorescent staining of tissues with the monoclonal antibodies revealed a fibrillar pattern that was mostly assocd. with loose connective tissue and overlapped with fibronectin fibrils. Fetal membrane tissue, which showed strong staining with the antibodies in immunofluorescence, also gave 65- and 75-kilodalton polypeptides with cell attachment-promoting activity after chromatog. of columns contg. the monoclonal antibodies. One source of the tissue protein may be fibroblastic cells, because cultured human **fibroblasts** also stained with the monoclonal antibodies. The staining was fibrillar and appeared to be assocd. with the cell surface extracellular matrix. The name vitronectin is proposed for the various forms of this protein, on the basis of its binding to glass and its adhesive properties.

=> d ibib abs 1

L16 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:42596 HCAPLUS
DOCUMENT NUMBER: 130:115061
TITLE: Wound dressing comprising a biodegradable cell anchoring layer
INVENTOR(S): Thomson, Brian Mark; Ali, Saad Abdul Majeed; Medcalf, Nicholas; Maltman, John; Winter, Sharon Dawn
PATENT ASSIGNEE(S): Smith & Nephew Plc, UK
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9900151	A2	19990107	WO 1998-GB1882	19980626
WO 9900151	A3	19990325		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9882245	A1	19990119	AU 1998-82245	19980626
EP 989866	A2	20000405	EP 1998-932298	19980626
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002507908	T2	20020312	JP 1999-505386	19980626

PRIORITY APPLN. INFO.:
GB 1997-13406 A 19970626
GB 1997-25209 A 19971128
WO 1998-GB1882 W 19980626

AB A wound dressing which comprises a carrier layer having a non-adherent to cell layer on a wound facing surface thereof is disclosed. The non-adherent layer has bonded thereto a biodegradable cell anchoring layer which anchors mammalian cells. In use, the degradable layer breaks down releasing the cells into the wound site which are discouraged from reattaching to the dressing by the non-adherent layer. Thus, the dressing can switch from a cell binding state to a state in which the binding of cells is discouraged. Systems, methods of treatment and methods of manufg. the dressing are also disclosed. Opsit IV 3000 polyurethane film was exposed to nitrogen plasma and promptly covered with a thin coat of a soln. contg. 20% ethylene glycol diglycidyl ether (I) and 1% CM-cellulose (II). An aq. soln. of 10 mg/mL-**heparin** was then sprayed on top of I:II acting and the resulting material was dried at 60.degree. for 5 h, then it was sterilized and stored dry. The above film was immersed in fetal calf serum and a suspension of human keratinocytes. Cells adhered to the film within 4-16 h. Following subsequent in vitro culture, the cells detached from the film and were released into the medium.

=> d ibib abs 2

L16 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:689255 HCAPLUS
DOCUMENT NUMBER: 129:281053
TITLE: Wound dressings containing active substances
INVENTOR(S): Woessner, Werner; Oswald, Ute; Meister, Frank; Hueckel, Marion; Mueller, Peter-Juergen; Buehler, Konrad; Taplick, Thomas
PATENT ASSIGNEE(S): Thueringisches Institut fuer Textil- und Kunststoff-Forschung e.V., Germany; Hans Knoell Institut fuer Naturstoff-Forschung e.V.; GWE Gesellschaft fuer Wissenschaft und Entwicklung m.b.H.; Gothaplast Verbandpflasterfabrik G.m.b.H.
SOURCE: Ger. Offen., 6 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19712699	A1	19981001	DE 1997-19712699	19970326
DE 19712699	C2	20000525		

AB A wound plaster consists of an adhesive-coated backing layer, an overlay comprising a dried polysaccharide gel contg. medicinally active substances and excipients, and a removable release liner. The polysaccharide gel is dried by microwave irradn., optionally with the aid of heated gases and/or IR irradn.; this method provides homogeneous drying, without degrdn. of the active agents, to a film which does not have the spongy, mech. weak structure of freeze-dried polysaccharide films. Thus, a mixt. of hyaluronic acid (mol. wt. 1.5 .times. 106) 2, glycerin 2, p-hydroxybenzoic acid 0.06, and distd. water 95.94 parts was continuously applied to the Teflon-coated belt of a film-casting machine and passed through a 6 m-long, 25-kW microwave tunnel at 35 m/h with a countercurrent stream of air at 40-50.degree. to produce a film 240 .mu.m thick. This plasticized hyaluronic acid film was scraped off and layered onto a band of cotton fabric (180 g/m2) at 50.degree.; the fabric band was then placed in the middle of a strip of adhesive-coated backing material and covered with detachable polypropylene film.

=> d ind 2

L16 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2002 ACS
IC ICM A61L015-28
ICS A61F013-02; A61L015-44; A61F017-00; A61K038-17; C08L005-00
CC 63-7 (Pharmaceuticals)
ST wound adhesive dressing polysaccharide gel; hyaluronate gel drug medical dressing
IT Medical goods
(absorbents; wound dressings contg. active substances)
IT Lipids, biological studies
Proteins (specific proteins and subclasses)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(complexes, with hyaluronic acid; wound dressings contg. active substances)
IT IR radiation

Microwave
(drying with; wound dressings contg. active substances)
IT Polysaccharides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gels; wound dressings contg. active substances)
IT Gases
(heated, drying with; wound dressings contg. active substances)
IT Absorbents
(medical; wound dressings contg. active substances)
IT Peptide complexes
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(with hyaluronic acid; wound dressings contg. active substances)
IT Anti-inflammatory drugs
Antioxidants
Binders
Blister
Cotton fabrics
Disinfectants
Dressings (medical)
Drugs
Drying
Emulsifying agents
Fabrics
Hydrocolloids
Hydrogels
Liposomes (drug delivery systems)
Permeation enhancers
Plasticizers
Preservatives
Thickening agents
Wound
(wound dressings contg. active substances)
IT Lymphokines
Vitamins
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(wound dressings contg. active substances)
IT Glycosaminoglycans, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(wound dressings contg. active substances)
IT 50-81-7, L-Ascorbic acid, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antioxidant; wound dressings contg. active substances)
IT 55-56-1D, Chlorhexidine, compds. with glucose 1837-57-6, Ethacridine lactate
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(disinfectant; wound dressings contg. active substances)
IT 260-94-6D, Acridine, derivs. 65431-33-6D, Trypaflavine, derivs.
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(dyes; wound dressings contg. active substances)
IT 56-81-5, 1,2,3-Propanetriol, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(plasticizer; wound dressings contg. active substances)
IT 110-44-1, Sorbic acid
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preservative; wound dressings contg. active substances)
IT 99-96-7D, esters

RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preservatives; wound dressings contg. active substances)

IT 50-99-7D, D-Glucose, compds. with chlorhexidine 79-83-4, Pantothenic acid
RL: BAC (Biological activity or effector, except adverse); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(wound dressings contg. active substances)

IT 62-49-7D, Choline, complexes with hyaluronic acid 1398-61-4, Chitin 9000-01-5, Gum arabic 9000-07-1, Carrageenan 9000-30-0, Guar gum 9000-40-2, Locust bean gum 9000-65-1, Gum tragacanth 9000-69-5, Pectin 9002-18-0, Agar 9004-32-4 9004-54-0, Dextran, biological studies 9004-61-9, Hyaluronic acid 9004-61-9D, Hyaluronic acid, derivs. 9004-61-9D, Hyaluronic acid, esters 9005-25-8, Starch, biological studies 9005-32-7, Alginic acid **9005-49-6, Heparin,** biological studies 9007-27-6, Chondroitin 9012-76-4, Chitosan 9050-67-3, Schizophyllan 9057-02-7, Pullulan 9067-32-7, Sodium hyaluronate 11138-66-2, Xanthan gum 39300-88-4, Tara gum 54724-00-4, Curdlan 69992-87-6, Keratan 71010-52-1, Gellan gum 73613-05-5, Fenugreek gum 75634-40-1, Dermatan 96949-21-2, Rhamsan gum 96949-22-3, Welan gum 111744-92-4, Benzyl hyaluronate 111745-19-8, Ethyl hyaluronate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**wound dressings** contg. active substances)

=> d ibib abs 3

L16 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:725353 HCAPLUS
DOCUMENT NUMBER: 126:51022
TITLE: Gel-forming system for use as wound dressings
INVENTOR(S): Fox, Adrian S.; Allen, Amy E.
PATENT ASSIGNEE(S): Nepera, Inc., USA
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5578661	A	19961126	US 1994-221159	19940331

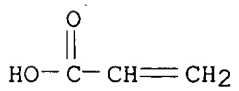
AB A gel-forming system comprising an aq. mixt. of a first component of at least one water-sol. polymer in an amt. sufficient to increase the initial viscosity of the mixt. and impart adhesion properties thereto; a second component of an acid-contg. polymer; a third component of an amino-contg. polymer; and water. This system has a pH 5.5-8.5 and the second and third components are each present in sufficient amts. which, in combination, increase the cohesiveness of the mixt. over time, such that the mixt. can be initially combined in a relatively fluid state and subsequently forms a cohesive gel structure. This system is useful as a wound dressing for deep wound cavities because the gel protects the wound and permits healing, does not interfere with new tissue growth or development, is capable of absorbing significant amts. of wound exudate, and has sufficient cohesive strength for subsequent removal from the cavity as an integral plug without interrupting the healing process. For example, a gel-forming compn. contained ethylene-maleic anhydride copolymer 0.5, N,O-carboxymethyl chitosan 2.5, PVP 10, polyethylene oxide 0.5, and NaOH 0.16 %.

=> d hitstr 3

L16 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2002 ACS
IT **9003-01-4**, Polyacrylic acid **9005-49-6**, **Heparin**
, biological studies **25104-18-1**, Poly(L-lysine)
25322-68-3, Polyethylene oxide **38000-06-5**,
Poly(L-lysine)
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gel-forming system for use as **wound dressings**)
RN 9003-01-4 HCAPLUS
CN 2-Propenoic acid, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7
CMF C3 H4 O2



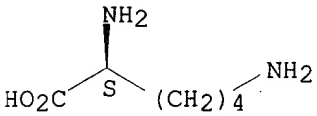
RN 9005-49-6 HCAPLUS
CN Heparin (8CI, 9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN 25104-18-1 HCAPLUS
CN L-Lysine, homopolymer (9CI) (CA INDEX NAME)

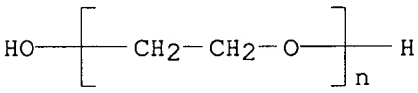
CM 1

CRN 56-87-1
CMF C6 H14 N2 O2
CDES 5:L

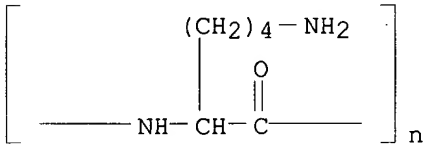
Absolute stereochemistry.



RN 25322-68-3 HCAPLUS
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy- (9CI) (CA INDEX NAME)



RN 38000-06-5 HCAPLUS
CN Poly[imino[(1S)-1-(4-aminobutyl)-2-oxo-1,2-ethanediyl]] (9CI) (CA INDEX NAME)



=> d ind 3

L16 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2002 ACS
IC ICM C08L005-00
ICS C08L039-06; C08L071-02
NCL 524027000
CC 63-7 (Pharmaceuticals)
ST wound dressing gel polymer mixt
IT Dressings (medical)
Electrolytes
(gel-forming system for use as wound dressings)
IT Glycosaminoglycans, biological studies
Peptides, biological studies
Platelet-derived growth factors
Polysaccharides, biological studies
Transforming growth factor .beta.1
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gel-forming system for use as wound dressings)
IT 526-95-4D, Gluconic acid, derivs. 9000-07-1, Carrageenan 9002-18-0, Agar **9003-01-4**, Polyacrylic acid 9003-39-8, PVP 9004-61-9, Hyaluronic acid 9005-32-7, Alginic acid **9005-49-6**, **Heparin**, biological studies 9006-26-2, Ethylene-maleic anhydride copolymer 9011-16-9, Maleic anhydride-methyl vinyl ether copolymer 9012-76-4, Chitosan **25104-18-1**, Poly(L-lysine) **25322-68-3**, Polyethylene oxide 28062-44-4, Acrylic acid-vinylpyrrolidone copolymer **38000-06-5**, Poly(L-lysine) 62229-50-9, Epidermal growth factor 83512-85-0, N-Carboxymethylchitosan 107043-88-9, N,O-Carboxymethylchitosan
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(gel-forming system for use as **wound dressings**)
IT 56-81-5, Glycerol, biological studies 96-48-0, .gamma.-Butyryl lactone 97-64-3, Ethyl lactate 123-42-2, Diacetone alcohol 872-50-4, N-Methylpyrrolidone, biological studies 2687-91-4, N-Ethylpyrrolidone
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(humectant; gel-forming system for use as wound dressings)

=> d ibib abs 4

L16 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:369827 HCAPLUS
DOCUMENT NUMBER: 125:35743
TITLE: Modified alginate fibers for wound dressings with improved absorbancy
INVENTOR(S): Qin, Yimin; Gilding, Keith Dennis
PATENT ASSIGNEE(S): Innovative Technologies Limited, UK
SOURCE: PCT Int. Appl., 12 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9610106	A1	19960404	WO 1995-GB2284	19950926
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9535306	A1	19960419	AU 1995-35306	19950926
GB 2307687	A1	19970604	GB 1997-6596	19950926
GB 2307687	B2	19990310		
EP 783605	A1	19970716	EP 1995-932127	19950926
R: BE, DE, DK, ES, FR, GB, IT, LU, NL, SE				
JP 10506442	T2	19980623	JP 1995-511498	19950926
US 6080420	A	20000627	US 1997-809686	19970630

PRIORITY APPLN. INFO.:		
GB 1994-19572	A	19940929
GB 1995-1514	A	19950126
GB 1995-16930	A	19950818
WO 1995-GB2284	W	19950926

AB The title fibers are prepd. by spinning aq. solns. contg. 70-95:5-30 (wt. ratio) mixts. of alginates and water-sol. nonalginate polymers [e.g., polysaccharides, poly(carboxyamino acids), poly(acrylic acid), poly(methacrylic acid) or salts thereof] into a coagulating bath. An aq. dope contg. Na alginate (Protanal LF 10/62) 12, CM-cellulose 1.5, and high-methyloxy pectin 1.5 kg was spun at 12 m/min, taken up at 7.2 m/min, drawn 80.degree., washed, dried, crimped, and cut to give staple fibers suitable for nonwoven wound dressings.

=> d ibib abs 5

L16 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:324872 HCAPLUS
DOCUMENT NUMBER: 122:89477
TITLE: Hydrolytically labile cyanogen halide-crosslinked polysaccharide microspheres
INVENTOR(S): Smith, Daniel J.; Chakravarthy, Debashish
PATENT ASSIGNEE(S): University of Akron, USA
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9427647	A1	19941208	WO 1994-US5702	19940519
W: CA, JP				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5549908	A	19960827	US 1993-65742	19930520

PRIORITY APPLN. INFO.: US 1993-65742 19930520

AB Water swellable and hydrolytically labile (and therefore potentially biodegradable) non-toxic microspheres or beads comprise a polysaccharide (e.g. dextran) crosslinked with a cyanogen halide (e.g. cyanogen bromide) in an aq. alk. medium which is a disperse phase of a water-in-oil dispersion. The microspheres are useful in the treatment of wounds, in particular as an absorptive agent for wound exudates. The microspheres may be formed into a wound dressing which includes a blend of the microspheres and a hydrophobic adhesive matrix material on a waterproof backing sheet.

=> d hitstr ind 5

L16 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2002 ACS
IT **9042-14-2P, Dextran sulfate**
RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(crosslinked; swellable and hydrolytically labile crosslinked polysaccharide microspheres for **wound dressings**)
RN 9042-14-2 HCAPLUS
CN Dextran, hydrogen sulfate (9CI) (CA INDEX NAME)

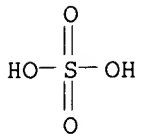
CM 1

CRN 9004-54-0
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 7664-93-9
CMF H2 O4 S



IC ICM A61L015-00
CC 63-6 (Pharmaceuticals)
ST cyanogen halide crosslinking polysaccharide microsphere bead; wound dressing crosslinking polysaccharide microsphere bead
IT Polysaccharides, biological studies
RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(crosslinked; swellable and hydrolytically labile crosslinked polysaccharide microspheres for wound dressings)
IT Crosslinking agents
(cyanogen halides; swellable and hydrolytically labile crosslinked polysaccharide microspheres for wound dressings)
IT Pharmaceutical dosage forms
(beads, swellable and hydrolytically labile crosslinked polysaccharide microspheres for wound dressings)
IT Medical goods
(dressings, swellable and hydrolytically labile crosslinked polysaccharide microspheres for wound dressings)
IT Pharmaceutical dosage forms
(microspheres, swellable and hydrolytically labile crosslinked polysaccharide microspheres for wound dressings)
IT 74-79-3DP, Arginine, grafts with dextran 9004-54-0P, Dextran, biological studies **9042-14-2P, Dextran sulfate**
RL: PNU (Preparation, unclassified); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(crosslinked; swellable and hydrolytically labile crosslinked polysaccharide microspheres for **wound dressings**)
IT 506-68-3, Cyanogen bromide
RL: RCT (Reactant)
(crosslinking agent; swellable and hydrolytically labile crosslinked polysaccharide microspheres for wound dressings)

=> d ibib abs 6

L16 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:563976 HCAPLUS
DOCUMENT NUMBER: 121:163976
TITLE: **Heparin**-fibroblast growth factor-fibrin complex: in vitro and in vivo applications to collagen-based materials
AUTHOR(S): DeBlois, Chantal; Cote, Marie-France; Doillon, J.
CORPORATE SOURCE: Laval University, Quebec, PQ, G1L 3L5, Can.
SOURCE: Biomaterials (1994), 15(9), 665-72
CODEN: BIMADU; ISSN: 0142-9612
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Biol. mols. such as fibrin and growth factors could have interesting features to design bioactive biomaterials and particularly collagen-based materials used as connective tissue replacement. Different combinations of fibroblast growth factor (FGF) and **heparin** complexes to fibrin were analyzed. In vitro, FGF bound to matrix was rapidly, but partially released, specifically with **heparin**. **Heparin** concns. were progressively equilibrated between matrix and medium. DNA replication of fibroblasts grown either on or within fibrin matrixes was increased in the presence of both FGF and high doses of **heparin** incorporated in fibrin. S.c. implantations of collagen sponges impregnated with composite fibrin matrixes showed qual. and quant. tissue ingrowth within the sponges. The noncrosslinked collagen of fibrin-impregnated sponges swelled after implantation. The resulting fibroblast-infiltrated tissue resembled a normal dense connective tissue that was obsd. particularly in the presence of high doses of **heparin** and FGF incorporated in fibrin.

=> d ibib abs 2

L18 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:803512 HCAPLUS
DOCUMENT NUMBER: 128:66528
TITLE: Absorptive wound dressing for wound healing promotion
INVENTOR(S): Donovan, Maura G.; Keogh, James R.; Holmblad, Carolann M.
PATENT ASSIGNEE(S): Medtronic, Inc., USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5695777	A	19971209	US 1994-241120	19940510

AB A wound dressing for use with exuding wounds includes (a) an outer vapor-permeable layer permitting transpiration of fluid from the dressing; (b) an intermediate layer of hydrogel adapted for absorbing wound exudate; (c) a wound-contacting layer for sepg. the intermediate hydrogel layer from the wound; (d) wicking means assocd. with the wound-contacting layer for conducting exudate from the wound to the hydrogel; and (e) a therapeutic agent retained in the dressing by the wound-contacting layer. An advantage of the invention lies in the use of an absorptive hydrogel which does not directly contact the wound and the hydrogel may be tailored to the needs of specific wounds through the inclusion of therapeutic agents such as antimicrobials which remain largely undelivered to the wound site and yet provide an environment which inhibits microbial growth.

=> d ibib abs 3

L18 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:563976 HCAPLUS
DOCUMENT NUMBER: 121:163976
TITLE: **Heparin-fibroblast** growth factor-fibrin complex: in vitro and in vivo applications to collagen-based materials
AUTHOR(S): DeBlois, Chantal; Cote, Marie-France; Doillon, J.
CORPORATE SOURCE: Laval University, Quebec, PQ, G1L 3L5, Can.
SOURCE: Biomaterials (1994), 15(9), 665-72
CODEN: BIMADU; ISSN: 0142-9612
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Biol. mols. such as fibrin and growth factors could have interesting features to design bioactive biomaterials and particularly collagen-based materials used as connective tissue replacement. Different combinations of **fibroblast** growth factor (FGF) and **heparin** complexes to fibrin were analyzed. In vitro, FGF bound to matrix was rapidly, but partially released, specifically with **heparin**. **Heparin** concns. were progressively equilibrated between matrix and medium. DNA replication of **fibroblasts** grown either on or within fibrin matrixes was increased in the presence of both FGF and high doses of **heparin** incorporated in fibrin. S.c. implantations of collagen sponges impregnated with composite fibrin matrixes showed qual. and quant. tissue ingrowth within the sponges. The noncrosslinked collagen of fibrin-impregnated sponges swelled after implantation. The resulting **fibroblast**-infiltrated tissue resembled a normal dense connective tissue that was obsd. particularly in the presence of high doses of **heparin** and FGF incorporated in fibrin.

=> d ibib abs 4

L18 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1990:597915 HCAPLUS
DOCUMENT NUMBER: 113:197915
TITLE: In vitro properties of crosslinked, reconstituted collagen sheets
AUTHOR(S): Morykwas, Michael J.
CORPORATE SOURCE: Bowman Gray Sch. Med., Wake Forest Univ., Winston-Salem, NC, 27103, USA
SOURCE: J. Biomed. Mater. Res. (1990), 24(8), 1105-10
CODEN: JBMRBG; ISSN: 0021-9304
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Reconstituted, 100-.mu.m-thick collagen sheets were crosslinked with either UV light, Cr, or cysteine for use as a burn covering. The sheets were also exposed to a "surface agent" (hydroxyproline, fibronectin, or sol. basement membrane matrix contg. Type IV collagen) as a preliminary step in planned adherence studies. Since some chems. render the collagen toxic, the modified sheets were tested for cytotoxicity using human **keratinocytes** and **fibroblasts**. Autoradiog. and 3H-thymidine incorporation were used to quantitate the proliferative rate of these cells in vitro. There was a universal depression of **keratinocyte** incorporation of 3H-thymidine following a 1-day exposure to any collagen sheet when compared to cells not exposed to any collagen. This effect had lessened by 5 days' exposure to the collagen. Conversely, the **fibroblasts** showed an enhancement in rate of incorporation after 1-day exposure, esp. for cells exposed to collagen sheets crosslinked by UV light. This effect had also lessened by 5 days' exposure. Autoradiog. showed few variations for any of the cells exposed for either time period. Cr leaching was detd., with no values >30% of the allowable max. set by both the British and American Pharmacopeia.

=> d bib abs 1

L15 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2002 ACS
AN 1997:172380 HCAPLUS
DN 126:176939
TI Moisture-holding films or sheets for manufacturing wound dressings and other products
IN Inaba, Yukitake; Usami, Takeshi; Yokomori, Yorozu
PA Kyowa Hakko Kogyo Kk, Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09010294	A2	19970114	JP 1995-165846	19950630

AB Films or sheets showing high vapor permeability, water absorbability and moisture-holding activity are prepd. from synthetic **polypeptides** such as poly-.gamma.-methyl-L-glutamate and polysaccharides (mucopolysaccharides) such hyaluronic acid. The films or sheets are useful for manufg. e.g. wound dressings and diapers.

=> d bib abs 2

L15 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2002 ACS
AN 1993:525199 HCAPLUS
DN 119:125199
TI Crosslinkable polysaccharides, **polycations** and lipids useful for encapsulation of drugs and cells and manufacture of wound dressings
IN Soon-Shiong, Patrick; Desai, Neil P.; Sandford, Paul A.; Heintz, Roswitha A.; Sojomihardjo, Soebianto
PA Clover Consolidated, Ltd., Switz.
SO PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9309176	A2	19930513	WO 1992-US9364	19921029
	WO 9309176	A3	19930722		
	W: AT, AU, BB, BG, BR, CA, CH, CS, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG				
	AU 9331247	A1	19930607	AU 1993-31247	19921029
	EP 610441	A1	19940817	EP 1992-925046	19921029
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE				
	US 5837747	A	19981117	US 1994-232054	19940428
PRAI	US 1991-784267		19911029		
	WO 1992-US9364		19921029		

AB Crosslinkable polysaccharides, **polycations** and lipids which are capable of undergoing free radical polymn. are used for encapsulation of drugs, biol. materials and cells, as well as manuf. of bioadhesives and wound dressing. Alginic acid was reacted with acryloyl chloride in presence of Et3NH2 under N for 24h to obtain alginate acrylate (I). A polymd. crosslinked gel was prepd. contg. I 0.1, acrylamide 0.1, water 3.75, glycerol 1.25, methylene bisacrylamide 0.01g. The gels can be prepd. as flat sheets that can be applied to wounds.

=> d ibib abs 1

L52 ANSWER 1 OF 14 USPATFULL

ACCESSION NUMBER:	2002:22131 USPATFULL		
TITLE:	18 Human secreted proteins		
INVENTOR(S):	Shi, Yanggu, Gaithersburg, MD, UNITED STATES Young, Paul E., Gaithersburg, MD, UNITED STATES Ebner, Reinhard, Gaithersburg, MD, UNITED STATES Soppet, Daniel R., Centreville, VA, UNITED STATES Ruben, Steven M., Olney, MD, UNITED STATES		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002012966	A1	20020131
APPLICATION INFO.:	US 2001-768826	A1	20010125 (9)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. WO 2000-US22350, filed on 15 Aug 2000, UNKNOWN		
	NUMBER		DATE
PRIORITY INFORMATION:	US 1999-148759P		19990816 (60)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850		
NUMBER OF CLAIMS:	23		
EXEMPLARY CLAIM:	1		
LINE COUNT:	18157		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to novel human secreted proteins and isolated nucleic acids containing the coding regions of the genes encoding such proteins. Also provided are vectors, host cells, antibodies, and recombinant methods for producing human secreted proteins. The invention further relates to diagnostic and therapeutic methods useful for diagnosing and treating diseases, disorders, and/or conditions related to these novel human secreted proteins.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d kwic

L52 ANSWER 1 OF 14 USPATFULL

SUMM . . . of cancer, as well as, developmental and immune disorders. For example, the proteins can be administered therapeutically to inhibit or **reverse** the development of tumors. Antibodies to the proteins can be used in diagnostic tests for conditions associated with protein expression. . .

SUMM . . . treating, detecting, and/or preventing said disorders and conditions, in addition to other types of degenerative conditions. Thus this protein may **modulate** apoptosis or tissue differentiation and would be useful in the detection, treatment, and/or prevention of degenerative or proliferative conditions and diseases. The protein is useful in **modulating** the immune response to aberrant polypeptides, as may exist in proliferating and cancerous cells and tissues. The protein can also. . .

SUMM . . . to determine biological activity, to raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies

directed against the protein. . .

SUMM . . . used to determine biological activity, raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . used to determine biological activity, raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . (1998)); all information available through these references are hereby incorporated by reference herein.). Leptin plays a pivotal role in the **modulation** of neuronal and hormonal systems involved in the regulation of body weight and reproductive functions. Additionally, the translation product of. . .

SUMM . . . to determine biological activity, to raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . is thought to be important in cell signaling. The Toll-related proteins can be used to alter phosphate metabolism and in **modulation** of inflammatory function and innate immune responses. The Toll-related proteins can also be used in the treatment of conditions exhibiting. . .

SUMM . . . to Toll proteins indicates that polynucleotides and polypeptides corresponding to this gene are useful for altering phosphate metabolism and in **modulation** of inflammatory function and innate immune responses.

SUMM . . . treating, detecting, and/or preventing said disorders and conditions, in addition to other types of degenerative conditions. Thus this protein may **modulate** apoptosis or tissue differentiation and would be useful in the detection, treatment, and/or prevention of degenerative or proliferative conditions and diseases. The protein is useful in **modulating** the immune response to aberrant polypeptides, as may exist in proliferating and cancerous cells and tissues. The protein can also. . .

SUMM . . . to determine biological activity, to raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . to determine biological activity, to raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . treating, detecting, and/or preventing said disorders and conditions, in addition to other types of degenerative conditions. Thus this protein may **modulate** apoptosis or tissue differentiation and would be useful in the detection, treatment, and/or prevention of degenerative or proliferative conditions and diseases. The protein is useful in **modulating** the immune response to aberrant polypeptides, as may exist in proliferating and cancerous cells and tissues. The protein can also. . . to determine biological activity, to raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . all references available through this accession are hereby incorporated by reference herein.) which is functionally associated with the IL-4 receptor, **modulates** B cell phenotype and is a novel member of the human macrophage mannose receptor family.

SUMM . . . The tissue distribution and homology to GP200-MR6 protein indicates that polynucleotides and polypeptides corresponding to this gene are useful for **modulating** B cell phenotype. The tissue distribution in dendritic cells indicates that the polynucleotides and polypeptides corresponding to this gene would. . .

SUMM . . . to determine biological activity, to raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . used to determine biological activity, raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . treating, detecting, and/or preventing said disorders and conditions, in addition to other types of degenerative conditions. Thus this protein may **modulate** apoptosis or tissue differentiation and would be useful in the detection, treatment, and/or prevention of degenerative or proliferative conditions and diseases. The protein is useful in **modulating** the immune response to aberrant polypeptides, as may exist in proliferating and cancerous cells and tissues. The protein can also. . . to determine biological activity, to raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . to determine biological activity, to raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . gene are useful for diagnosis and/or treatment of cancer. For example, the proteins can be administered therapeutically to inhibit or **reverse** the development of tumors. The tissue distribution in brain also indicates that the polynucleotides and polypeptides corresponding to this gene. . . treating, detecting, and/or preventing said disorders and conditions, in addition to other types of degenerative conditions. Thus this protein may **modulate** apoptosis or tissue differentiation and would be useful in the detection, treatment, and/or prevention of degenerative or proliferative conditions and diseases. The protein is useful in **modulating** the immune response to aberrant polypeptides, as may exist in proliferating and cancerous cells and tissues. The protein can also. . . to determine biological activity, to raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . tumorogenesis. Hepatoma-derived growth factor(HDGF), has been recently cloned (Nakamura, H. et al., J. Biol. Chem., 269(40):25143-25149 (1994)). HDGF is a **heparin**-binding protein which is mitogenic for **fibroblasts**. HDGF was purified from the conditioned medium of a human hepatoma-derived cell line, HuH-7 by tritiated thymidine incorporation into Swiss. . .

SUMM . . . gene are useful for diagnosis and/or treatment of cancer. For

example, the proteins can be administered therapeutically to inhibit or **reverse** the development of tumors. The expression within fetal tissue and other cellular sources marked by proliferating cells indicates this protein. . . treating, detecting, and/or preventing said disorders and conditions, in addition to other types of degenerative conditions. Thus this protein may **modulate** apoptosis or tissue differentiation and would be useful in the detection, treatment, and/or prevention of degenerative or proliferative conditions and diseases. The protein is useful in **modulating** the immune response to aberrant polypeptides, as may exist in proliferating and cancerous cells and tissues. The protein can also. . .

SUMM . . . used to determine biological activity, raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . Hepatoma-derived growth factor (HDGF), has been recently cloned (Nakamura, H. et al., J. Biol. Chem., 269(40):25143-25149 (1994)). HDGF is a **heparin**-binding protein which is mitogenic for **fibroblasts**. HDGF was purified from the conditioned medium of a human hepatoma-derived cell line, HuH-7 by tritiated thymidine incorporation into Swiss. . .

SUMM . . . of cancer, particularly of the colon, pancreas, and ovaries. For example, the proteins can be administered therapeutically to inhibit or **reverse** the development of tumors. The expression within fetal tissue and other cellular sources marked by proliferating cells indicates this protein. . . treating, detecting, and/or preventing said disorders and conditions, in addition to other types of degenerative conditions. Thus this protein may **modulate** apoptosis or tissue differentiation and would be useful in the detection, treatment, and/or prevention of degenerative or proliferative conditions and diseases. The protein is useful in **modulating** the immune response to aberrant polypeptides, as may exist in proliferating and cancerous cells and tissues. The protein can also. . .

SUMM . . . to determine biological activity, to raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . tetramers. IL-16 requires the expression of CD4 for its functions, which include induction of chemotaxis, interleukin-2 receptor and HLA-DR expression, **reversible** inhibition of TcR/CD3-dependent activation and induction of a repressor of HIV-1 transcription. It represents a major source of the lymphocyte. . .

SUMM . . . used to determine biological activity, raise antibodies, as tissue markers, to isolate cognate ligands or receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . treating, detecting, and/or preventing said disorders and conditions, in addition to other types of degenerative conditions. Thus this protein may **modulate** apoptosis or tissue differentiation and would be useful in the detection, treatment, and/or prevention of degenerative or proliferative conditions and diseases. The protein is useful in **modulating** the immune response to aberrant polypeptides, as may exist in proliferating and cancerous cells and tissues. The protein can also. . . to determine biological activity, to raise antibodies, as tissue markers, to isolate cognate ligands or

receptors, to identify agents that **modulate** their interactions, in addition to its use as a nutritional supplement. Protein, as well as, antibodies directed against the protein. . .

SUMM . . . treating, detecting, and/or preventing said disorders and conditions, in addition to other types of degenerative conditions. Thus this protein may **modulate** apoptosis or tissue differentiation and would be useful in the detection, treatment, and/or prevention of degenerative or proliferative conditions and diseases. The protein is

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L52 ANSWER 2 OF 14 USPATFULL

ACCESSION NUMBER:	2001:212417 USPATFULL		
TITLE:	In situ bioreactors and methods of use thereof		
INVENTOR(S):	Pierce, Glenn, Rancho Santa Fe, CA, United States Chandler, Lois Ann, Encinitas, CA, United States		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001044413	A1	20011122
APPLICATION INFO.:	US 2000-729644	A1	20001130 (9)
	NUMBER		DATE
PRIORITY INFORMATION:	US 1999-168470P		19991201 (60)
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	APPLICATION		
LEGAL REPRESENTATIVE:	SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300, SEATTLE, WA, 98104-7092		
NUMBER OF CLAIMS:	104		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	3 Drawing Page(s)		
LINE COUNT:	2302		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides in situ bioreactors comprising a biocompatible substance comprising nucleic acid molecules and capable of cellular ingrowth and systemic delivery of a bioactive agent. Also provided are compositions, devices, and kits comprising the same. In various embodiments the biocompatible substance comprises a matrix and at least one nucleic acid molecule encoding a bioactive agent. In other embodiments bioreactors are provided wherein a first gene that encodes a growth factor is present and a second gene encoding a bioactive agent is present during manufacture or provided to the bioreactor following manufacture or implantation.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d kwic 2

L52 ANSWER 2 OF 14 USPATFULL

DETD . . . only for a short duration of time. The matrices may take the form of sponges, implants, tubes, telfa pads, band-aids, **bandages**, fibers, hollow fibers, sutures, pads, lyophilized components, gels, patches, powders, porous compositions, or nanoparticles. In addition, matrices can be designed. . .

DETD . . . been widely used in medical applications are poly(paradioxanone) (PDS), poly(lactic acid) (PLA), poly(glycolic acid) (PGA), and PLGA copolymers. Copolymerization enables **modulation** of the degradation time of the material. By changing the ratios of crystalline to amorphous polymers during polymerization, properties of. . .

DETD . . . sutures. In certain embodiments of the invention, such medical devices and other matrices may be coated with nucleic acids and/or **polypeptides** using conventional **coating** techniques as are well known in the art. Such methods include, by way of example and not limitation, dipping the. . .

DETD . . . adenosine deaminase, factor XIII, Protein C, Protein S, an

interleukin, an interferon, insulin, tissue plasminogen activator, plasminogen, plasmin, urokinase, streptokinase, **heparin**, thrombomodulin, and Protein C activating agents. An exemplary, and in no way wholly inclusive, listing is provided in Table I. . . Lawn, PNAS 78:5435, 1981

	h-gDNA	Todokoro, EMBO J. 3:1809, 1984
	h-gDNA	Torczynski, PNAS 81:6451, 1984
interferon, beta	h-cDNA	Taniguchi, Gene 10:11, 1980
(**fibroblast**)	h-gDNA	Lawn, Nuc. Acid Res. 9:1045, 1981
	h-gDNA (related)	Sehgal, PNAS 80:3632, 1983
	h-gDNA (related)	Sagar, Sci. 223:1312, 1984
		V00546,. . .

=> d ibib abs 3

L52 ANSWER 3 OF 14 USPATFULL

ACCESSION NUMBER:	2001:75536 USPATFULL
TITLE:	Heparin binding mitogen with homology to epidermal growth factor (EGF)
INVENTOR(S):	Klagsbrun, Michael, Newton, MA, United States Abraham, Judith A., San Jose, CA, United States Higashiyama, Shigeki, Osaka, Japan Besner, Gail E., Buffalo, NY, United States
PATENT ASSIGNEE(S):	Scios Nova, Inc., Mountain View, CA, United States (U.S. corporation) The Children's Medical Center Corporation, Boston, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6235884	B1	20010522
APPLICATION INFO.:	US 1998-158710		19980922 (9)

RELATED APPLN. INFO.:	Division of Ser. No. US 1993-39364, filed on 15 Jun 1993, now patented, Pat. No. US 5811393 Continuation-in-part of Ser. No. US 598082, now abandoned
DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Allen, Marianne P.
LEGAL REPRESENTATIVE:	Fish & Richardson P.C.
NUMBER OF CLAIMS:	6
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	5 Drawing Figure(s); 5 Drawing Page(s)
LINE COUNT:	1411

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are **heparin** binding mitogens which include an epidermal growth factor-homologous segment (HB-EHM). These factors stimulate proliferation of **fibroblast** cells, epithelial cells, and smooth muscle cells, but not endothelial cells. Also disclosed are isolated antibodies that recognize, and purified nucleic acids that encode, the above growth factors as well as isolated polypeptides, vectors containing such nucleic acids, and cells harboring such vectors. Growth factors of this invention may be used for accelerating the rate of wound healing, for the in vitro culture of HB-EHM-responsive cells, and for the identification of antagonists to HB-EHM.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d kwic 3

L52 ANSWER 3 OF 14 USPATFULL

AB Disclosed are **heparin** binding mitogens which include an epidermal growth factor-homologous segment (HB-EHM). These factors stimulate proliferation of **fibroblast** cells, epithelial cells, and smooth muscle cells, but not endothelial cells. Also disclosed are isolated antibodies that recognize, and purified. . .

SUMM **Heparin** affinity chromatography has been used extensively for purifying and characterizing a variety of these growth factors. Acidic FGF (aFGF) and basic FGF (bFGF) bind to immobilized **heparin** columns and are eluted with 1.0M to 1.2M NaCl and 1.5M to 1.8M NaCl, respectively (Folkman and Klagsbrun, 235 Science. . . Biol. Chem.

1924, 1986). Several growth factors which are structurally homologous to aFGF and bFGF also have an affinity for **heparin** (see, for example, Rubin et al., 86 Proc. Natl. Acad. Sci. USA 802, 1989). PDGF binds to immobilized **heparin**, but with relatively low affinity, being eluted with only 0.5M NaCl. Epidermal growth factor (EGF) does not bind **heparin** to any substantial extent under the conditions described in the cited references on **heparin** binding growth factors. Lobb et al. (261 J. Biol. Chem. 1924, 1986) report the partial purification by **heparin** affinity of two classes of growth factors mitogenic for endothelial cells. Gospodarowicz et al. (81 Proc. Natl. Acad. Sci. USA 6963, 1984) report the use of **heparin** affinity in the purification of bovine brain and pituitary **fibroblast** growth factors. Shing et al. (29 J. Cell Biochem. 275, 1985) report a chondrosarcoma-derived growth factor purified by **heparin**-Sepharose affinity chromatography and Bio Rex 70 cation exchange chromatography. Bohlen et al. (185 FEBS Lett. 177, 1985) report a **fibroblast** growth factor, derived from human brain, which is purified by cation-exchange chromatography, **heparin**-Sepharose affinity, and **reverse**-phase HPLC. Shing et al. (223 Science 1296, 1984) report a **heparin**-binding tumor cell-derived capillary endothelial cell factor. Besner et al. (107 J. Cell Biol. 481a, 1988) report the detection of a **heparin** -binding, mononuclear cell-derived growth factor(s) which is cationic, is of 6000-14,000 MW, is inactivated by heat (100.degree. C., 10 min), is. . .

SUMM In a second aspect, the invention features polypeptides which bind **heparin**, which include an EGF-homologous segment, and which stimulate growth of **fibroblast** cells, epithelial cells, and smooth muscle cells, but not endothelial cells.

DETD Conditioned medium was assayed for growth factor activity directly, as described below, using either **fibroblasts** (i.e., BALB/c mouse 3T3 cells), epithelial cells (i.e., human **keratinocytes**), or smooth muscle cells (i.e., bovine aortic smooth muscle cells, BASMC). Alternatively, CM was first fractionated by fast protein liquid chromatography (FPLC, Pharmacia, Piscataway, N.J.) by applying 500 ml of the CM to a TSK-**heparin** 5PW column (8.times.75 mm, TOSOHAAS, Philadelphia, Pa.). The column was washed with 10 column volumes of equilibration buffer (0.2M NaCl,. . .

DETD . . . the three step purification outlined above (and eluting from the TSK-heparin column at 1-1.2M NaCl) was applied to a C.sub.4 -**reversed** phase high performance liquid chromatography column (RP-HPLC). A Beckman model 334 HPLC system was used (Beckman Instruments, Inc., Somerset, N.J.). The sample was loaded onto the C.sub.4 -**reversed** phase HPLC column (4.6.times.250 mm, Vydac) after equilibration of the column with 5% acetonitrile, 0.1% trifluoroacetic acid. The column was. . .

DETD . . . the protein, approximately 1.7 ug of protein obtained after cation exchange, copper-affinity, and heparin-affinity chromatography and two cycles of C.sub.4 -**reversed** phase HPLC of 20 L of conditioned medium were loaded onto an Applied Biosystems gas-phase protein sequencer. Twenty rounds of. . .

DETD . . . a five minute incubation at room temperature between each addition. The protein mixture was desalted by passage through a C.sub.4 -**reversed** phase HPLC column, dried, resuspended in 200 .mu.l of 100 mM ammonium bicarbonate, and digested with 0.5 .mu.g of trypsin. . . added, and the reaction was incubated for two additional hours at 27.degree. C. Digestion products were separated on a C.sub.18 -**reversed** phase HPLC (RP-HPLC) column and subjected to amino terminal sequencing.

DETD . . . 25 mM followed by incubation of the reaction mixture for 30

minutes at room temperature. After desalting on a C.sub.18 **reversed** phase HPLC column (4.6.times.150 mm, Vydac; gradient of 10% to 40% acetonitrile in 0.1% trifluoroacetic acid), the protein was dried. . .

DETD . . . with O-glycanase lowered the apparent molecular weight of HB-EHM from 18-20 kDa to about 14-16 kDa (as judged by polyacrylamide **gel** electrophoreses) suggesting that this **polypeptide** was modified extensively by O-linked glycosylation.

DETD . . . purification of the recombinant HB-EHM was accomplished by loading the 2M elute from the heparin-Sepharose column onto a Vydac C.sub.4 **reversed**-phase column (1 cm.times.25 cm) equilibrated with 15% acetonitrile in 0.1% trifluoroacetic acid, and then eluting the bound protein with a. . .

DETD . . . growth factors to the injured site will also be used as will the combination of such growth factors with topical **bandages**, or **dressings**, or sutures/staples, and with topical creams and ointments, such as the antibacterial Silvadene (Marion Labs, Kansas City, Mo.), commonly used. . .

=> d ibib abs 4

L52 ANSWER 4 OF 14 USPATFULL

ACCESSION NUMBER:	2000:137849 USPATFULL		
TITLE:	Medicaments containing gelatin cross-linked with oxidized polysaccharides		
INVENTOR(S):	Schacht, Etienne, Staden, Belgium Draye, Jean Pierre, Chaste, Belgium Delaey, Bernard, Zingem, Belgium		
PATENT ASSIGNEE(S):	Innogenetics N.V., Belgium (non-U.S. corporation)		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6132759		20001017
	WO 9741899		19971113
APPLICATION INFO.:	US 1998-180057		19981027 (9)
	WO 1997-EP2279		19970505
			19981027 PCT 371 date
			19981027 PCT 102(e) date
	NUMBER		DATE
PRIORITY INFORMATION:	EP 1996-870059		19960503
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Kulkosky, Peter F.		
LEGAL REPRESENTATIVE:	Bierman, Muserlian and Lucas		
NUMBER OF CLAIMS:	17		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	26 Drawing Figure(s); 15 Drawing Page(s)		
LINE COUNT:	1841		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a wound **dressing** comprising a biopolymer matrix comprising gelatin cross-linked with an oxidized polysaccharide. Preferably said oxidized polysaccharide comprises an oxidized dextran or an oxidized xanthan. Preferably said matrix is in the form of a hydrated film, a hydrated or dry foam, dry fibers which may be fabricated into a woven or non-woven tissue, hydrated or dry microbeads, dry powder; or said matrix is covered with a semipermeable film, so as to control the humidity of the wound covered with the **dressing**, with the permeability chosen so as to maintain this humidity within a therapeutically optimal window. A polysulfated polysaccharide with a M.W. greater than 30,000 kDa is mechanically entrapped during the formation of said matrix.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d kwic 4

L52 ANSWER 4 OF 14 USPATFULL

AB The present invention relates to a wound **dressing** comprising a biopolymer matrix comprising gelatin cross-linked with an oxidized polysaccharide. Preferably said oxidized polysaccharide comprises an oxidized dextran or. . . said matrix is covered with a semipermeable film, so as to control the humidity of the wound covered with the **dressing**, with the permeability chosen so as to maintain this humidity within a therapeutically optimal window. A polysulfated polysaccharide with a. . .

SUMM . . . When loaded with suitable growth factors or wound repair promoting substances, the matrix is useful for the fabrication of wound **dressings** for the treatment of a variety of wound types, particularly chronic wounds and burns.

SUMM . . . optimal healing. The beneficial effect of covering wounds is situated at different levels and is dependent on the type of **dressing** material used. First, especially with acute wounds, suitable **dressings** may help to achieve haemostasis and thus control blood loss. Secondly, covering effectively shields the wound from the environment, thus protecting it from microbial contamination. Furthermore, some so-called occlusive or semi-occlusive wound **dressings** have the capability of maintaining the wound moist, which is beneficial for healing. Finally, some wound **dressings** may themselves directly promote the healing process, for instance because they contain components which directly promote cell growth or migration or which attract or activate cells from the immune system which on their turn secrete growth-promoting substances. Other **dressings** may contain antimicrobial substances, which are helpful to control infection of the wound.

SUMM Over time, a surprisingly wide variety of **dressing** materials have been used for wound covering, many of which are currently commercially available. Each of them has its own. . .

SUMM Cotton gauze, for instance, is widely used as wound **dressing**. It has the advantage of being cheap, but the disadvantage of being not occlusive and sometimes becoming encrusted into the wound. To prevent this, these **dressings** are sometimes impregnated with a greasy substance, such as paraffin. A commercially available example of such a **dressing** is Jelonet.TM. (Smith and Nephew, UK).

SUMM Another class of wound **dressings** are the absorptive hydrogel **dressings**. These have no occlusive properties, but have a high capacity for the absorption of exudate and slough. They consist of. . . which swell upon contact with wound fluid and can absorb several times their own weight of exudate. Commercially available hydrogel **dressings** include Intrasite gel (Smith and Nephew, UK) and Vigilon (CR Bard, USA). A special type of hydrogels are the alginates,. . .

SUMM Another type of **dressings** are the occlusive or semi-occlusive **dressings**. In their simplest form, they usually exist of a thin, flexible plastic membrane, e.g. from polyurethane. To facilitate application, these **dressings** are usually fabricated with a self-adhesive coating. These **dressings** are called occlusive because they limit water evaporation from the wound surface, thus keeping it moist. Examples of such **dressings** are Opsite (Smith and Nephew, UK) and Tegaderm (3M, USA). Examples of semi-occlusive **dressings** are Omiderm (latro Medical Systems, UK) and Exkin (Koninklijke Utermohlen, The Netherlands). The latter **dressings** allow a slightly higher evaporation rate, resulting in a semi-dry wound surface.

SUMM A more complex type of occlusive **dressings** are the hydrocolloid (HCD) **dressings**. These are made up of hydrocolioid particles (e.g. consisting of gelatin, pectin, etc.) embedded in a hydrophobic matrix (e.g. a polyisobutylene). These **dressings** may be backed with an occlusive membrane and/or a foam plastic layer. In addition to being occlusive, HCD **dressings** have a high absorptive capacity, making them very suitable for the treatment of wounds producing high amounts of exudate. These beneficial properties have made HCD **dressings** among the most successfully used **dressings** for the treatment of chronic ulcerations of the skin. Commercially available examples of these **dressings** include Duoderm.degree. (Convatec, UK) and Tegasorb.TM. (3M, USA).

SUMM Although highly successful, recent reports suggest that HCD **dressings** may nevertheless induce undesirable side reactions in the treated tissues. For example, Van Luyn reports that Duoderm E (Convatec, UK), Biofilm (Biotrol SPA, France), Comfeel (Coloplast, Denmark) and Ulcer **dressing** (Johnson and Johnson, USA), all of which are HCD **dressings**, fall within the high toxicity class when tested in a methylcellulose assays using human skin fibroblasts as target cells (Van. . . University Groningen, The Netherlands; Van Luyn, M., Abstract Book of the joint WHS/ETRS meeting, Amsterdam, 1993 p114). All the HCD **dressings** tested by this author highly inhibited cell growth (>70%) and induced strongly deviant morphologies in the surviving cells. Leek et al. (Abstract Book of the Second Annual WHS Meeting, Richmond, Va., USA, p75, 1992) have tested four HCD **dressings** in full-thickness excisional wounds in pigs. All **dressings** induced development of granulomatous lesions between 4 and 10 days post wounding and exhibiting little evidence of resolution at 3. . . obtained with Duoderm and Intrasite HCD. Rosdy and Clauss (J. Biomedical Mat. Res. 24, 363-3777, 1990) found that the HCD **dressing** Granuflex.TM. (Bristol-Myers Squibb, USA) induced cytopathic effects on MRC5 fibroblasts and epidermal cells upon direct contact. Young et al. (J.. . . model system the development of deep-seated foreign body type reactions and granulomata in healed wounds which were treated with HCD **dressings**. Our own experiments with the HCD **dressing** Duoderm.TM. show that this **dressing** results in a marked and chronic inflammatory response when placed in full thickness wounds in pigs.

SUMM The above mentioned data suggest that, while HCD **dressings** may promote wound healing in the short term, their use is often associated with undesirable inflammatory effects. Therefore, it is clear that there is a need for a wound **dressing** displaying the beneficial properties of HCD **dressings**, yet resulting in substantially less chronic inflammation or foreign body response. Such a wound **dressing** would stimulate granulation tissue formation, be absorptive and preferably be biodegradable within a limited time frame.

SUMM Gelatin, which is a denatured form of the protein collagen, has been used in a variety of wound **dressings**. Since gelatin gels have a relatively low melting point, they are not very stable at body temperature. Therefore, it is. . . the non cross-linked variety was not. Therefore, despite their beneficial haemostatic properties, these products are not very optimal as wound **dressings** for the treatment of problematic wounds such as chronic ulcers or burns. Consequently, a gelatin-based wound **dressing** which uses a different, less toxic, cross-linking technology would be very desirable. Dextran is a polysaccharides which is also widely used for medical purposes, and which may also be used in a wound **dressing**. For example, PCT publication number WO 94/27647 (Smith and Chakravarty) teaches the fabrication of a polymer composition comprised of cross-linked. . . where the cross-linking groups consist of linear imido carbonate or carbonate groups. This polymer can be incorporated in a wound **dressing**. An important feature of this polymer composition is that it is hydrolytically labile. This means that hydrated forms of the. . .

SUMM Apart from the development of improved **dressings**, increasing attention has been given over the last years to the possible use of growth factors to promote the healing. . .

SUMM . . . the production of physical PLG/peptide mixtures (e.g. by compression moulding of powder mixes), these may be less suitable as wound **dressings** because of their rigidity and brittleness.

SUMM . . . uses a different, less toxic, cross-linking technology would be very desirable for the fabrication of, for instance, growth

factor-medicated wound **dressings**.

SUMM The present invention thus aims at providing a suitable wound **dressing**.

SUMM The present invention further aims at methods for producing and using said wound **dressings** or said controlled or slow release devices.

SUMM . . . present invention relates to the unexpected finding that polymers comprising gelatin cross-linked with oxidized polysaccharides constitute excellent medicament such as **dressings** for the treatment of wounds. The cross links are formed by Schiff base formation between free amino groups of the. . .

SUMM . . . on the wound site in an intact form for a sufficiently long time. Another advantage is that the disclosed wound **dressing** has substantially reduced cytotoxical and inflammatory properties as compared with existing gelatin-based materials. This is exemplified in examples 3-5. Yet. . . highly desirable for the treatment of chronic wounds. A further advantage is that one of the embodiments of the disclosed **dressing** offers the possibility to immobilize sulfated dextrans or similar poly-anionic molecules into the **dressing**, a modification which enhances the binding of incorporated or local heparin binding wound repair **modulating** factors.

SUMM . . . peptide). Such medicated GDP matrices may be used for several therapeutical applications, in particular for the fabrication of medicated wound **dressings**, e.g. by loading them with growth factors or other wound repair-enhancing substances.

SUMM . . . prepared in this way are useful for a variety of therapeutical applications, in particular for the fabrication of medicated wound **dressings**.

SUMM In a preferred embodiment, the proposed wound **dressing** consists of a hydrated sheet or film of matrix as defined above, backed with an occlusive or semi-occlusive film. Occlusive. . . sufficiently low to prevent desiccation of the wound, yet sufficiently high to prevent excessive accumulation of exudate below the wound **dressing**.

SUMM In another embodiment, the wound **dressing** is fabricated in the form of dehydrated microparticles. These microparticles are especially suited to be applied into deep, highly exudative. . .

SUMM The proposed polymer can also be used for the fabrication of a wound **dressing** containing one or more wound repair-promoting substances. Examples of such substances are for instance growth factors such as EGF, TGF-.alpha., FGFs, PDGFs, amphiregulin, HB-EGF, betacellulin, TGF-.beta., IGFs or other mitogens or their antagonists which may **modulate** the wound repair process. Such a medicated wound **dressing** can be produced in different forms, including flexible sheets, foams, microparticles, fibers to make up woven or non-woven tissues, etc. One of the embodiments of the invention concerns the production of a wound **dressing** containing multiple layers, where each layer contains a different active component, so as to achieve a programmed delivery of the. . .

SUMM The present invention relates more particularly to the finding that GDP constitutes an excellent material for the preparation of **dressings** suitable for the covering and treatment of wounds. In addition, the material also displays unexpectedly favourable controlled release properties for. . .

SUMM . . . polysaccharides useful within the framework of the invention. The molecular weight of the dextran used for the fabrication of wound **dressings** according to the invention is preferably below 5,000,000, more preferably between 10,000 and 100,000, in such a way that the. . .

SUMM . . . to the present invention, GDP prepared as described above can be used for the fabrication of a variety of wound **dressings**.

SUMM . . . dehydration still takes place because fluid can evaporate from the surface of the film. To prevent this, the GDP wound **dressing** film can be additionally covered by one of the commercially available occlusive or semi-occlusive wound **dressing** films, for example a polyurethane such as Opsite or Tegaderm. However, a better solution is provided according to another preferred. . . This type of film has a very low water vapour permeability, making it very suitable for the fabrication of wound **dressings** intended for use on relatively dry wounds. For application on more exudative wounds a higher evaporation rate is desirable, to prevent excessive accumulation of fluid under the **dressing**. In this instance, a backing membrane with higher water vapour permeability may be preferred, such as those manufactured by Utermohlen. . . shall be obvious that, depending on the type of wound, the degree of exudate formation and the desired frequency of **dressing** change, other backing films with different water vapour permeability properties can be used, to obtain an optimal fluid balance at. . .

SUMM According to another embodiment, GDP is fabricated into a hydrated or dehydrated particulate wound **dressing**. Several techniques are known to achieve this. A dry GDP powder or granulate may be produced by dehydration of a. . . dehydrated gel particles, known to the person skilled in the art, may also be used to prepare a particulate wound **dressing** according to this invention. Such a particulate wound **dressing** may be useful for the treatment of a variety of wound types, but especially for the treatment of relatively deep. . . colonization, to the limitation of further necrotization and to the relieve of discomfort for the patient. Such a particulate wound **dressing** can also be used in its hydrated form (i.e. by omitting the dehydration process after particle preparation or by rehydrating. . . obvious that, depending on the needs of a particular wound type, the possibility also exists to use the particulate wound **dressing** in a partially hydrated form. In the latter form, the **dressing** still would have substantial fluid absorptive properties, yet, by virtue of a certain stickiness, it would easily be applicable as a paste or be fabricated into a thin film. By adapting the type of gel, wound **dressings** can be designed that are appropriate for treatment of other wounds such as corneal wounds or defects, tympanic membrane reconstructions,. . . chronic otorrhea. It shall also be clear that the dehydrated, partially hydrated and fully hydrated forms of these particulate wound **dressings** can be suspended in any suitable aqueous or organic excipient to facilitate application. Examples of such excipients include, but are. . .

SUMM Another physical form into which GDP wound **dressings** can be fabricated is a foam. This can be achieved for instance by adding a suitable biocompatible detergent to the. . .

SUMM . . . a known affinity for certain growth factors or wound healing-promoting substances. Examples of such components are those with affinity for **heparin** binding proteins, such as **heparin** or functional analogs of **heparin** such as heparan sulfate, chondroitin sulfate, dermatan sulfate, **dextran sulfate** or any other non-toxic polyanionic group displaying sufficient affinity for one or more of the molecular factors implicated in the. . . wound repair stimulating factors. These factors may subsequently be gradually released, thus promoting healing of the injury. The potential of **heparin**-like molecules and similar polyanions to bind and stabilize certain growth factors is well known in the art. The following are. . . Biophys., 300, p.30-41, 1993; Biochim. Biophys. Acta 1203, p.18-26, 1993). Tomoko et al. describe the stabilization of basic FGF

with **dextran sulfate** (FEBS Letters, 306, p.243-246, 1992). Turnbull and Gallagher review the role of heparan sulphate as a functional **modulator** of **fibroblast** growth factor activity (Biochem. Soc. Trans. 21, 477-482, 1993). By the incorporation of such polyanionic compounds in the GDP matrix. . .

SUMM One of the possible applications of the present invention lies in the fabrication of wound **dressings** containing one or more wound repair stimulating factors and/or a suitable antiseptic agent. Wound repair stimulating agents which are eligible for incorporation in such a wound **dressing** are for instance growth factors such as those belonging to the class of the EGF, FGF, PDGF, TGF-.beta., VEGF, PD-ECGF. . . agents include antibiotics, antibacterial sulfamides or peptides, chinolones, antimycotics, etc., as far as they are suitable for topical use. Wound **dressings** containing wound repair promoting agents can be used for the treatment of wounds which are difficult to heal. Injuries which. . . tympanic membrane perforations, surgical wounds, skin graft donor sites, burn wounds, etc. In the case of burn wounds, the wound **dressings** can be directly applied on a second or third degree burn. However, in case of extensive third degree burns, it is preferable to first graft the burn with meshed autologous skin. Application of the medicated GDP wound **dressing** directly on top of this autologous meshed graft will stimulate the closure of the meshed graft interstices, resulting in faster. . .

SUMM To facilitate application on the treatment site, the medicated GDP wound **dressings** can be manufactured in different forms. For instance, sheet- or film-like **dressings** can conveniently be applied onto burn wounds, shallow ulcers, skin graft donor sites and other types of shallow wounds. To reduce fluid evaporation and dehydration of the **dressing** and the underlying wound, the **dressing** can be covered with a flexible membrane, the water permeability of which is chosen so as to obtain an optimal. . . results from the atopic or superfluous presence of certain factors and that the presence of certain layers within the wound **dressing** can be used to sequester these unwanted factors. Other factors that can be sequestered comprise those that can lead to. . . also one of the advantages of the present invention that programmed delivery of several drugs is possible using only one **dressing**, i.e. without having to change wound **dressings.**

SUMM . . . as some types of pressure sores or chronic ulcers, it may be more convenient to fabricate the medicated GDP wound **dressing** in the form of microparticles, foams, pastes or other forms which are easily conformable to the wound shape. Microparticles may. . .

SUMM It will be clear to the person skilled in the art that the fabrication of medicated wound **dressings** with controlled release properties is but one application of the present invention. Many other possible applications of the use of. . .

DETD . . . for instance Exkin (produced by Utermohlen NV, The Netherlands). This plastic foil, which can be used as a semi-occlusive wound **dressing**, has a bilayer structure consisting of a macroporous and a microporous layer. Due to its higher porosity, it has a. . .

DETD . . . X 1205 foil has a better barrier function and may thus be suited for the preparation of GDP laminate wound **dressings** intended for the treatment of wounds producing low amounts of exudate. On the contrary, the Exkin membrane allows a higher evaporation rate and is consequently more suited for preparation of GDP laminate wound **dressings** intended for the treatment of wounds producing high exudate volumes.

DETD One of the most important prerequisites for the clinical usefulness of a wound **dressing** is that it has a high biocompatibility.

Therefore, it is essential that the material displays a very low or even. . .

DETD . . . on top of the methylcellulose gel covering the seeded cells. For comparison a similarly sized piece of the hydrocolloid ulcer **dressing** Duoderm (obtained from Convatec, UK) is placed on another well. A third well serves as negative control and receives no. . . and GDP, respectively. This indicates that GDP has a considerably lower cytotoxicity towards these fibroblasts than the commonly used ulcer **dressing** Duoderm.

DETD . . . of surviving cells is 65 and 30% with GDP and Duoderm, respectively. After 6 days of incubation with the wound **dressings**, the percentage of surviving cells is 32 and 9% with GDP and Duoderm, respectively. This again confirms the superior cytotoxicity. . .

DETD . . . 1.4% of the cells survive with GDP and Duoderm, respectively. Once more, this underscores the superior properties of the GDP **dressing**, since it has only a limited cytotoxicity for keratinocytes, while incubation with Duoderm results in almost 100% cell death within. . .

DETD . . . above show that GDP has a very favourable and low cytotoxicity level. We have compared GDP with Duoderm because both **dressings** are of a similar type and because the latter is a very frequently used **dressing** for the treatment of chronic ulcers. The fact that GDP is superior to Duoderm with respect to cytotoxicity underscores its clinical applicability as a wound **dressing**.

DETD . . . inflammatory events or foreign body reactions are observed. This means the material is well suited for the fabrication of wound **dressings**.

DETD . . . of Duoderm, while the remaining eight wounds serve as controls. All wounds are subsequently covered with Tegaderm (an occlusive polyurethane **dressing**) and fixed with Fixomull and Velpo **bandages**. At 2, 5, 9 and 20 days after surgery, two wounds of each treatment are examined macroscopically and subsequently fully. . .

DETD . . . GDP is a highly biocompatible material, which generates a significantly lower long term inflammatory response than the widely used ulcer **dressing** Duoderm. Moreover, the material is completely biodegradable over a period of 1-3 weeks, although it remains largely intact for about. . .

DETD Preparation of a **Polypeptide**-loaded GDP **Film**

DETD For evaluation of release kinetics of controlled delivery wound **dressings**, an elution test system as described above is not ideal. Since the elution is carried out by means of an. . . system can be considered as highly efficient, and with a kinetics profile which is suitable for application in a wound **dressing**.

DETD For application in the manufacturing of growth factor-containing medicated wound **dressings**, GDP should also allow the efficient release of larger peptide factors. To evaluate this, a number of test proteins with. . .

DETD . . . for larger proteins, release occurs with high efficiency and according to kinetics which are favourable for application in medicated wound **dressings**. Also, the stability of the matrix proves to be sufficient to allow prolonged storage.

DETD . . . developing EGF for therapeutical purposes. Therefore, EGF can be regarded as an appropriate molecule to be incorporated in medicated wound **dressings** such as those disclosed in the present invention.

DETD . . . bioactive form. GDP matrices according to this invention are therefore suitable controlled release devices for the fabrication of medicated wound **dressings**.

DETD . . . pig model is conducted in order to further characterize and confirm the biocompatibility of dextran dialdehyde cross-linked gelatin hydrogel (GDP) **dressing** when placed in a full-thickness wound environment. The biocompatibility of GDP is evaluated, in comparison with two largely used **dressings**, the hydrocolloid **dressing** DuoDERM and the occlusive **dressing** Tegaderm, by characterization of the intensity and/or time duration of the inflammatory reaction during wound healing. A pilot study is. . .

DETD . . . containing 0.5% dextran sulphate (MW: 400000-600000), and 8 wounds are treated with extra thin DuoDERM (5 cm.times.5 cm), a hydrocolloid **dressing** from Convatec. All the wounds are covered with Tegaderm, an occlusive **dressing** which provides for a moist environment, and which is obtained from 3M Medical products. **Dressings** are fixed with Fixomull stretch, from Beiersdorf, and Velpo **bandages** to prevent possible self-trauma to the wounds.

DETD T is the time given in days between the two wound healing evaluations. Since the **dressings** are not changed during this evaluation, A.sub.1 and P.sub.1 are the area and the perimeter of the wound at day. . .

DETD . . . and Tegaderm treatments, indicating that GDP treatment is at least as good as two of the best and largely used **dressings**. Wounds treated with 0.5% dextran sulphate-containing GDP always appear in a more advanced stage of healing. For dextran sulphate-containing GDP-treated. . . radial progression towards wound closure is similar for three treatments (GDP, Tegaderm and Duoderm) indicating again that GDP is a **dressing** at least as good as Tegaderm or Duoderm, and certainly does not interfere negatively with wound healing. The radial progression. . .

DETD . . . wound healing in pig, the healing of GDP-treated wounds is comparable to the healing of wounds treated with two good **dressings** (Duoderm and Tegaderm). The healing of the wounds treated with dextran sulphate-containing GDP is always in a more advanced stage. . .

DETD . . . foreign body reaction is seen in the Duoderm-treated wounds. GDP and dextran sulphate-containing GDP can thus be considered as biocompatible **dressings**. In this example, dextran sulphate containing GDP-treated wounds re-epithelialize faster than DuoDERM and Tegaderm treated wounds indicating that dextran sulphate-containing. . .

CLM What is claimed is:

. . . antibody or a microprotein obtainable by phage display that have a high and selective affinity for molecular factors that can **modulate** the wound healing process.

13. A medicament containing a biopolymer of claim 1 in the form of a wound **dressing** and/or controlled release device.

=> d ibib abs 5

L52 ANSWER 5 OF 14 USPATFULL

ACCESSION NUMBER:	2000:128306 USPATFULL
TITLE:	Chitin hydrogels, methods of their production and use
INVENTOR(S):	Drohan, William N., Springfield, VA, United States MacPhee, Martin J., Gaithersburg, MD, United States Miekka, Shirley I., Gaithersburg, MD, United States Singh, Manish S., Columbia, MD, United States Elson, Clive, Halifax, Canada Taylor, Jr., John R., New York, NY, United States
PATENT ASSIGNEE(S):	Chitogenics, Inc., Morristown, NJ, United States (U.S. corporation) The American National Red Cross, Washington, DC, United States (U.S. corporation) Coalition for Hemophilia B, New York, NY, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6124273		20000926
APPLICATION INFO.:	US 1997-960555		19971013 (8)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1996-659999, filed on 7 Jun 1996, now abandoned		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1995-109P	19950609 (60)

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Fonda, Kathleen K.
LEGAL REPRESENTATIVE:	Lahive & Cockfield, LLP
NUMBER OF CLAIMS:	32
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	6 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT:	2441

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention is directed to the preparation and utilization of supplemented chitin hydrogels, such as chitosan hydrogels. Further provided are biomaterials comprising same. The particular supplement delivered by the chitin hydrogel is selected as a function of its intended use. In one embodiment, this invention provides a composition of matter, comprising a chitin hydrogel or chitin-derived hydrogel, wherein the hydrogel does not inhibit full-thickness skin wound healing.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

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L52 ANSWER 5 OF 14 USPATFULL

SUMM . . . N.Y. pp. 231-277 (1979) and Brunt et al., Biotechnology 6:25-30 (1988)). These activities include recruiting cells, such as leukocytes and **fibroblasts**, into the injured area, and inducing cell proliferation and differentiation. Growth factors that may participate in wound healing include, but. . . growth factor-2 (IGF-2); epidermal growth factor (EGF); transforming growth factor-.alpha. (TGF-.alpha.); transforming growth factor-.beta. (TGF-.beta.); platelet factor 4 (PF-4); and **heparin** binding growth factors one and two (HBGF-1

and HBGF-2, respectively).

SUMM The **heparin** binding growth factors (HBGFs), including the **fibroblast** growth factors (FGFs), which include acidic HBGF (aHBGF also known as HBFG-1 or FGF-1) and basic HBGF (bHBGF also known. . . Biochem. 58:575-606 (1989)). In addition, HBGF-1 is chemotactic for endothelial cells and astroglial cells. Both HBGF-1 and HBGF-2 bind to **heparin**, which protects them from proteolytic degradation. The array of biological activities exhibited by the HBGFs suggests that they play an. . .

SUMM Demineralized bone matrix (DBM) is a source of osteoinductive proteins known as bone morphogenetic proteins (BMP), and growth factors which **modulate** the proliferation of progenitor bone cells (see, e.g., Hauschka et al., J. Biol. Chem. 261:12665-12674 (1986) and Canalis et al.,. . .

SUMM In another embodiment, this invention provides a simple to use, fast acting, field-ready **bandage** for applying a hydrogel to wounded tissue in a patient, comprising an occlusive backing, affixed to which is a layer. . . chitosan to produce a tissue-sealing hydrogel matrix upon hydration. Further embodiments pertain to the use and preparation of the chitin **bandage**.

SUMM In yet another embodiment, this invention provides a simple to use, fast acting, field-ready **dressing** for treating wounded tissue in a patient, is formulated as an expandable foam comprising an effective amount of purified chitin. . . chitosan to produce a tissue-sealing hydrogel matrix upon hydration. Further embodiments pertain to the use and preparation of the chitin **dressing**.

SUMM . . . that because the components of the chitin hydrogel can be formulated into several forms of simple to use, fast-acting field **dressings**, it is now possible to control bleeding from hemorrhaging trauma wounds, thereby saving numerous lives that previously would have been. . .

DETD A "cross-linked chitin hydrogel" of the type used in the **bandage** or in the wound **dressing** of the present invention, refers to a hydrogel wherein the chitin component is cross-linked to form a stable matrix by. . .

DETD . . . ulcers in diabetic individuals, and for delivering growth factors including, but not limited to, angiogenins; endothelins; hepatocyte growth factor and **keratinocyte** growth factor; **fibroblast** growth factors, including **fibroblast** growth factor-1 (FGF-1), **fibroblast** growth factor-2 (FGF-2), and **fibroblast** growth factor-4 (FGF-4); platelet-derived growth factors (PDGF); insulin-binding growth factors (IGF), including insulin-binding growth factor-1 and insulin-binding growth factor-2; epidermal. . . factor (OIF); osteogenin and other bone growth factors; bone morphogenetic growth factors (BMP), including BMP-1 and BMP-2; collagen growth factor; **heparin**-binding growth factors, including **heparin**-binding growth factor-1 and **heparin** -binding growth factor-2; cytokines; interferons; hormones and biologically active derivatives thereof, and providing a medium for prolonged contact between a wound. . .

DETD . . . equivalent analogs thereof; colony stimulating factors; erythropoietin;; steroids; anesthetics; analgesics; and hormones. The above-mentioned drugs may be used to treat, **reverse** or prevent neoplasias, cell hyperproliferation. Neurotoxins, including antibiotics having neurotoxic effects such as gentamycin, may also be used to treat. . .

DETD . . . be exploited to increase the duration of a drug's release from the hydrogel. Alternatively, this phenomenon can be exploited to **modulate** the release of drugs other than the compound used to stabilize the hydrogel, which is also incorporated into the

TET-hydrogel,. . .

DETD The chitin hydrogel may be formulated as a self-contained wound **dressing**, or **bandage**. The self-contained **dressing** or **bandage** is easy-to-use, requiring no advanced technical knowledge or skill to operate. It can even be self-administered as an emergency first. . .

DETD The self-contained chitin hydrogel-containing wound **dressing** or **bandage** is an advancement over the current technology in that the field-ready preparation is inexpensive and can be stored for long. . .

DETD The self-contained chitin hydrogel wound **dressing** or chitin hydrogel-containing **bandage** comprises a tissue sealing composition comprising a chitin hydrogel complex, which may consist of other chitins or their derivatives with. . .

DETD The growth factor may include, e.g., **fibroblast** growth factor-1, **fibroblast** growth factor-2 and **fibroblast** growth factor-4; platelet-derived growth factor; insulin-binding growth factor-1; insulin-binding growth factor-2; epidermal growth factor; transforming growth factor-.alpha.; transforming growth factor-.beta.; cartilage-inducing factors -A and -B; osteoid-inducing factor; osteogenin and other bone growth factors; collagen growth factor; **heparin**-binding growth factor-1; **heparin**-binding growth factor-2; and/or their biologically active derivatives.

DETD The concentration of the chitin hydrogel and/or hydrating agent(s) of the self-contained chitin hydrogel wound **dressing** or chitin hydrogel **bandage** may have a significant effect on the density and setting time of the final matrix. This principle may be used to satisfy specific uses of the self-contained chitin hydrogel-containing wound **dressing** or **bandage** in specialized situations. For example, the treatment of an arterial wound may require the chitin hydrogel seal to set very. . .

DETD In the gel pack embodiment of the self-contained **dressing**, the chitin components and hydrating agent components are individually contained in independent quick-evaporating gel layers (e.g., methylcellulose/alcohol/water), wherein the two. . . from each other by an impermeable membrane, and the pair are covered with an outer, protective, second impermeable membrane. The **bandage** may be coated on the surface that is in contact with the gel in order to insure that the gel. . .

DETD . . . the two gel layers is removed, allowing the two components to mix. The outer membrane is then removed and the **bandage** is applied to the wound site. This results in a natural inhibition of blood and fluid loss from the wound,. . .

DETD . . . chitin components and the hydrating agent, may be omitted. In operation, the outer impervious plastic film is removed and the **bandage** applied, as previously described, directly to the wound site. The fluids naturally present at the wound site then hydrate the. . .

DETD The Chitin Hydrogel **Bandage** Embodiments

DETD A chitin hydrogel **bandage** embodiment is formulated for releasing a necessary supplement to wounded tissue in a patient, wherein the **bandage** comprises, a layer of dry materials comprising an effective amount of chitin or its derivative to upon hydration form a hydrogel, wherein the layer of dry materials is affixed to the wound-facing surface of the **bandage**. In one embodiment, the occlusive backing and the physiologically-acceptable adhesive layer are one and the same, if the backing layer. . .

DETD . . . a removable, waterproof, protective film is placed over the layer of dry materials and the exposed adhesive surface of the **bandage** for long-term stable storage. In operation the

waterproof, protective film is removed prior to the application of the **bandage** over the wounded tissue.

DETD The chitin component of the **bandage** in one embodiment is activated at the time the **bandage** is applied to the wounded tissue to form a chitin hydrogel by the patient's endogenous fluids escaping from the hemorrhaging. . . chitin hydrogel is hydrated and fluid loss from the wound will be significantly diminished within minutes of application of the **bandage** to the wounded tissue. Although the speed with which the chitin hydrogel forms and sets may be to some degree. . . form within twenty minutes after application. More preferably, this effect will be evident within ten minutes after application of the **bandage**. Most preferably, the chitin hydrogel will form within two to five minutes after application. In the embodiment comprising the most. . .

DETD It may be necessary to use pressure in applying the chitin hydrogel **bandage** until the chitin hydrogel has formed over the wound site.

DETD . . . as in a life-threatening situation, the chitin hydrogel is hydrated by a suitable, physiologically-acceptable liquid prior to application of the **bandage** to the wounded tissue.

DETD To construct the **bandage**, the dry materials may be obtained, for example, by lyophilization or freeze-drying, or suitable, commercially-available materials may be utilized. The. . .

DETD The backing of the chitin hydrogel **bandage** may be of conventional, non-resorbable materials, e.g., a silicone patch or plastic material; or it may be of biocompatible, resorbable. . .

DETD Subsequent removal of the clot with the backing is acceptable in many situations, such as when the chitin hydrogel **bandage** is used as a first aid measure until medical assistance becomes available.

DETD . . . is advantageous to remove the backing from the chitin hydrogel without disturbing the established hydrogel matrix. Therefore, a chitin hydrogel **bandage** is provided in which the adhesive layer is of a material having a lower tensile or shear strength than that. . .

DETD . . . comparison, certain internal applications mandate the use of a resorbable backing to eliminate the need for subsequent removal of the **dressing**. A resorbable material is one which is broken down spontaneously or by the body into components which are consumed or. . .

DETD . . . the chitin hydrogel. In the alterative for such purposes, the dry material layer may be affixed directly to the occlusive **bandage**.

DETD . . . skin or tissue surrounding or adjacent to the wound in such a way that the dry material region of the **bandage** forms a chitin hydrogel directly over the wound. The adhesive layer on the region of backing which is not covered by the dry material layer of the **bandage** is sufficient to affix the chitin hydrogel to the tissue surrounding the wound until its physical removal. The adhesive on the outer region must be sufficient to hold the **bandage** in place, even if fluids are hemorrhaging from the wound under pressure, e.g., an arterial wound.

DETD . . . the alterative for such purposes, the dry material layer may be affixed in the inner region directly to the occlusive **bandage**, with an adhesive layer added only to the outer layer.

DETD Thus, in the two adhesive embodiment, the backing of the chitin hydrogel **bandage** remains in place affixed to the tissue surrounding the wound until the **bandage** is physically removed. But upon removal, the backing separates from the chitin hydrogel without disturbing matrix attached to the wound.

DETD In yet another embodiment of the chitin hydrogel **bandage**, an independent hydrating layer comprising an effective amount of carbonated

water or physiologically-acceptable buffered hydrating agent, such as PBS, or. . . within a rupturable, liquid-impermeable container. The rupturable, liquid-impermeable container encapsulating the hydrating layer is affixed directly to the above-described occlusive **bandage** layer or to the above-described adhesive layer adjacent to the occlusive **bandage**. Affixed to the exposed side (the side which is not attached to the backing or adhesive layer) of the rupturable,. . .

DETD . . . components until a malleable hydrated chitin hydrogel complex forms, at which time the outer membrane is physically removed and the **bandage** placed over the wound.

DETD As in other embodiments of the chitin hydrogel **bandage**, the selected adhesives and backing materials may be determined by the intended application of the **bandage**. The backing may be removable or resorbable, and the adhesive may have the intended purpose upon removal of the **bandage** of removing the chitin hydrogel from the wound, or of leaving the chitin hydrogel undisturbed. The adhesive may be a. . .

DETD . . . previously disclosed growth factors, antibiotics, antiseptics, antiproliferative drugs, etc. may also be included in this embodiment of the chitin hydrogel **bandage**.

DETD In an alternate dual layer embodiment, the chitin hydrogel is delivered as a wound sealing **dressing**, which need not be affixed to a backing. The components are organized essentially as a capsule within a capsule, wherein. . .

DETD A self-foaming chitin hydrogel **dressing** embodiment for treating wounded tissue in a patient is formulated as an expandable foam comprising a hydrogel-forming amount of chitin. . .

DETD For example, use of the expandable foam chitin hydrogel **dressing** within the abdomen provides a chitin hydrogel to provide a barrier to infection while releasing a necessary supplement. However, at. . . harmful pressure on undamaged tissue, organs or blood vessels. Such a situation may warrant the use of an expandable foam **dressing** in which the expansion is limited to only 1- or 2-fold, and not more than 5-10 fold.

DETD By comparison, use of the expandable foam chitin hydrogel **dressing** to fill gaps within bone, may warrant the use of material which expands at a much greater rate to produce. . .

DETD Like the expansion rate, the set-up time for the formation of the chitin hydrogel using the expandable foam chitin hydrogel **dressing** is also related to its intended application. Although a set-up time of under 1 minute is appropriate, set-up times of. . .

DETD Since delivery pressure of the expandable foam chitin hydrogel **dressing** from the delivery device, when combined with the composition of the chitin hydrogel itself and its set-up time, determines the extent of expansion of the **dressing**, the delivery pressure is determined by the nature of the wound being treated. Pressure of 1 atmosphere, or less (14.7. . .

DETD Finally, certain traumatic injuries will be best treated by combining several embodiments of the chitin hydrogel **dressing**. For example, in serious car accidents or injuries caused by antipersonnel-mines or explosives, the wounds may be not only life-threatening. . . first liberally apply a hemostatic agent, and then to wrap the entire area in an embodiment of the chitin hydrogel **bandage** to support and protect the wounded area, and perhaps release a painkilling and/or antimicrobial composition and slow fluid loss with. . . to a medical facility, or until professional medical assistance can administered. In most instances, additional formulations of the chitin hydrogel **dressing** will then be applied by the trained personnel for the long-term repair, treatment and protection of

the injured tissue.

DETD . . . can be stabilized using ionic crosslinking with positively charged polypeptides (Singh, M., Ph.D. Thesis: "Electrostatic effects on the release of **polypeptides** from collagen **hydrogels**," Univ. of Maryland, Baltimore County, Baltimore, Md. (1994)). This current work supports the earlier study as evidenced by the fact. . .

DETD . . . decreased by combining negatively charged NOCC with positively charged polylysine (PL) (Singh M., Ph.D. Thesis: Electrostatic effects on release of **polypeptides** from collagen **hydrogels**, Univ. of Maryland, Baltimore, Md. (1994)) to retard the diffusional mobility of the diffusing species. The present example discloses the. . .

CLM What is claimed is:

25. A wound **dressing** composition for treatment of wounded tissue, said composition comprising a covalently cross-linked N,O-carboxymethyl chitosan hydrogel; and a resorbable backing consisting. . .

=> d ibib abs 6

L52 ANSWER 6 OF 14 USPATFULL
ACCESSION NUMBER: 1999:92656 USPATFULL
TITLE: Compositions and methods for **modulating** growth of a tissue in a mammal
INVENTOR(S): Weisz, Paul B., State College, PA, United States
PATENT ASSIGNEE(S): Trustees of the University of Pennsylvania, Philadelphia, PA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5935940		19990810
APPLICATION INFO.:	US 1997-906500		19970805 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1994-345011, filed on 23 Nov 1994, now patented, Pat. No. US 5658894 which is a continuation of Ser. No. US 1992-900592, filed on 18 Jun 1992, now abandoned And a continuation-in-part of Ser. No. US 1991-790320, filed on 12 Nov 1991, now abandoned which is a continuation of Ser. No. US 1991-691168, filed on 24 Apr 1991, now abandoned which is a continuation of Ser. No. US 1989-397559, filed on 23 Aug 1989, now abandoned , said Ser. No. US 900592 which is a continuation-in-part of Ser. No. US 1990-480407, filed on 15 Feb 1990, now patented, Pat. No. US 5183809
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lee, Howard C.
LEGAL REPRESENTATIVE: Panitch Schwarze Jacobs & Nadel, P.C.
NUMBER OF CLAIMS: 29
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Figure(s); 5 Drawing Page(s)
LINE COUNT: 1497
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Polyionic derivatives of cyclodextrins and methods for preparing these derivatives are provided in which a polyionic derivative of cyclodextrin is combined with a growth factor, preferably a heparin binding growth factor. These compositions are of low solubility and are applied directly to the location of a wound. By virtue of the low solubility, the compositions remain in place at the site of application and slowly release growth factor. In an alternative embodiment, the cyclodextrin derivatives are administered in the absence of growth factor and are used to absorb growth factor present in the body at the location of the wound in order to prevent overstimulation of the wound response.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d kwic 6

L52 ANSWER 6 OF 14 USPATFULL
TI Compositions and methods for **modulating** growth of a tissue in a mammal
DETD . . . thus be introduced at or near the sites of tissue damage or sites of implantation, or applied externally as wound **dressings** , etc. In such embodiments, the compositions and compounds of the present invention are preferably combined with a solid carrier which. .

DETD . . . and/or are combined with biologically active proteins. According to preferred embodiments, the biologically active protein exhibits a specific affinity for **heparin**, and, more specifically, is **heparin**-binding growth factor, i.e., a class of growth factors, many of which are mitogenic for endothelial cells. An example of such a growth factor is basic **fibroblast** growth factor. Generally it will be the **heparin**-binding growth factor proteins, commonly referred to as HBGF's, which may be combined with the saccharide derivatives of the present invention.. . .

DETD . . . shift resulting from heparin binding on the dye has been used to identify active heparin-like compounds having the capability of **modulating** angiogenesis. Such dye complexing of the active protein also is similarly resistant to salt concentration as is the complexing to. . .

DETD . . . example of a flat polymer product of polyamide polymer, manufactured by 3M Corporation, and used as a bio-compatible patch or **dressing** on wounds. This biocompatible patch or **dressing** is designed to physically protect a wound from invasion of pathogens, and yet to have sufficient porosity to allow passage. . . or already present in biomembranes. Biological membranes such as omentum and amnion are well known in the art as wound **dressings**. Collagen based synthetic biomembranes are being used in the treatment of burns. The presence of derivatized saccharide of the present. . .

DETD . . . (1952, J. Biol. Chem. 193:265-275). Protein concentrations of the pure growth factor were estimated by comparing the intensities of silver-stained **polypeptide** bands of SDS-polyacrylamide **gel** to those of the molecular weight markers.

DETD . . . NaCl, about 230 units of three activity was recovered when eluted with about 2M NaCl. These results indicate that basic **fibroblast** growth factor has a very strong affinity for beta-cyclodextrin tetradecasulfate and is at least comparable to that of FGF for **heparin**. The activity peak was analyzed by SDS polyacrylamide gel electrophoresis followed by a silver stain. Lane 2 in FIG. 4 shows the polypeptide band of basic **fibroblast** growth factor.

CLM What is claimed is:

1. A composition for **modulating** growth of a tissue of a mammal, the composition comprising a growth-**modulating** polyanionic cyclodextrin derivative monomer, wherein said monomer comprises at least six glucopyranose units and at least two, but fewer than. . .

20. The composition of claim 19, wherein said **heparin** binding growth factor is selected from the group consisting of brain endothelial cell growth factor, retina-derived growth factor, interleukin-1, interleukin-2, interferon alpha, interferon gamma, tumor necrosis factor alpha, epidermal growth factor, acidic **fibroblast** growth factor, basic **fibroblast** growth factor, insulin-like growth factor-1, insulin-like growth factor-2, platelet-derived growth factor, transforming growth factor-alpha, and transforming growth factor-beta.

. . . a medium comprising a growth factor, the method comprising the steps of contacting said medium with a composition comprising a growth-**modulating** polyanionic cyclodextrin derivative monomer under conditions which permit binding of said growth factor to said composition, wherein said monomer comprises. . .

=> d ibib abs 7

L52 ANSWER 7 OF 14 USPATFULL

ACCESSION NUMBER:	1999:56471 USPATFULL
TITLE:	Methods of **modulating** tissue growth and regeneration
INVENTOR(S):	Herrmann, Howard C., Bryn Mawr, PA, United States Barnathan, Elliot, Havertown, PA, United States Weisz, Paul B., State College, PA, United States
PATENT ASSIGNEE(S):	The Trustees of the University of Pennsylvania, Philadelphia, PA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5902799		19990511
APPLICATION INFO.:	US 1997-906501		19970805 (8)

RELATED APPLN. INFO.: Division of Ser. No. US 1994-345011, filed on 23 Nov 1994, now patented, Pat. No. US 5658894 which is a continuation of Ser. No. US 1992-900592, filed on 18 Jun 1992, now abandoned And a continuation-in-part of Ser. No. US 1991-790320, filed on 12 Nov 1991, now abandoned which is a continuation of Ser. No. US 1991-691168, filed on 24 Apr 1991, now abandoned which is a continuation of Ser. No. US 1989-397559, filed on 23 Aug 1989, now abandoned , said Ser. No. US 900592 which is a continuation-in-part of Ser. No. US 1990-480407, filed on 15 Feb 1990, now patented, Pat. No. US 5183809

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Lee, Howard C.
LEGAL REPRESENTATIVE:	Panitch Schwarze Jacobs & Nadel, P.C.
NUMBER OF CLAIMS:	80
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	6 Drawing Figure(s); 5 Drawing Page(s)
LINE COUNT:	1703

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Polyionic derivatives of cyclodextrins and methods for preparing these derivatives are provided in which a polyionic derivative of cyclodextrin is combined with a growth factor, preferably a heparin binding growth factor. These compositions are of low solubility and are applied directly to the location of a wound. By virtue of the low solubility, the compositions remain in place at the site of application and slowly release growth factor. In an alternative embodiment, the cyclodextrin derivatives are administered in the absence of growth factor and are used to absorb growth factor present in the body at the location of the wound in order to prevent overstimulation of the wound response.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d kwic 7

L52 ANSWER 7 OF 14 USPATFULL
TI Methods of **modulating** tissue growth and regeneration
DETD . . . thus be introduced at or near the sites of tissue damage or sites of implantation, or applied externally as wound **dressings** , etc. In such embodiments, the compositions and compounds of the present invention are preferably combined with a solid carrier which. . .
DETD . . . and/or are combined with biologically active proteins. According to preferred embodiments, the biologically active protein exhibits a specific affinity for **heparin**, and, more specifically, is **heparin**-binding growth factor, i.e., a class of growth factors, many of which are mitogenic for endothelial cells. An example of such a growth factor is basic **fibroblast** growth factor. Generally it will be the **heparin**-binding growth factor proteins, commonly referred to as HBGF's, which may be combined with the saccharide derivatives of the present invention.. . .
DETD . . . shift resulting from heparin binding on the dye has been used to identify active heparin-like compounds having the capability of **modulating** angiogenesis. Such dye complexing of the active protein also is similarly resistant to salt concentration as is the complexing to. . .
DETD . . . example of a flat polymer product of polyamide polymer, manufactured by 3M Corporation, and used as a bio-compatible patch or **dressing** on wounds. This biocompatible patch or **dressing** is designed to physically protect a wound from invasion of pathogens, and yet to have sufficient porosity to allow passage. . . or already present in biomembranes. Biological membranes such as omentum and amnion are well known in the art as wound **dressings**. Collagen based synthetic biomembranes are being used in the treatment of burns. The presence of derivatized saccharide of the present. . .
DETD . . . (1952, J. Biol. Chem. 193:265-275). Protein concentrations of the pure growth factor were estimated by comparing the intensities of silver-stained **polypeptide** bands of SDS-polyacrylamide **gel** to those of the molecular weight markers.
DETD . . . NaCl, about 230 units of the activity was recovered when eluted with about 2M NaCl. These results indicate that basic **fibroblast** growth factor has a very strong affinity for beta-cyclodextrin tetradecasulfate and is at least comparable to that of FGF for **heparin**. The activity peak was analyzed by SDS polyacrylamide gel electrophoresis followed by a silver stain. Lane 2 in FIG. 4 shows the polypeptide band of basic **fibroblast** growth factor.
CLM What is claimed is:
. . . cell growth factor, retina-derived growth factor, interleukin-1, interleukin-2, interferon alpha, interferon gamma, tumor necrosis factor alpha, epidermal growth factor, acidic **fibroblast** growth factor, basic **fibroblast** growth factor, insulin-like growth factor-1, insulin-like growth factor-2, platelet-derived growth factor, transforming growth factor-alpha, transforming growth factor-beta, and a **heparin**-binding growth factor.

30. The method of claim 29, wherein the growth factor is selected from the group consisting of brain endothelial cell growth factor, retina-derived growth factor, interleukin-1, interleukin-2, interferon alpha, interferon gamma, tumor necrosis factor alpha, epidermal growth factor, acidic **fibroblast** growth factor, basic **fibroblast** growth factor, insulin-like growth factor-1, insulin-like growth factor-2, platelet-derived growth factor,

transforming growth factor-alpha, transforming growth factor-beta, and a **heparin**-binding growth factor.

45. The method of claim 44, wherein the growth factor is selected from the group consisting of interleukin-1, interleukin-2, interferon alpha, interferon gamma, tumor necrosis factor alpha, epidermal growth factor, acidic **fibroblast** growth factor, basic **fibroblast** growth factor, insulin-like growth factor-1, insulin-like growth factor-2, platelet-derived growth factor, transforming growth factor-alpha, transforming growth factor-beta, and a **heparin** -binding growth factor.

60. A method of **modulating** proliferation of an endothelial cell in a mammal, the method comprising administering locally to the endothelial cell a composition comprising a polyanionic cyclodextrin derivative and a physiologically acceptable carrier in an amount effective to **modulate** proliferation of the endothelial cell, the cyclodextrin derivative comprising at least one cyclodextrin monomer and having a body temperature solubility. . .
61. The method of claim 60, wherein **modulating** proliferation of an endothelial cell comprises promoting proliferation of the endothelial cell, and wherein the composition frrther comprises a growth. . . selected from the group consisting of interleukin-1, interleukin-2, interferon alpha, interferon gamma, tumor necrosis factor alpha, epidermal growth factor, acidic **fibroblast** growth factor, basic **fibroblast** growth factor, insulin-like growth factor-1, insulin-like growth factor-2, platelet-derived growth factor, transforming growth factor-alpha, transforming growth factor-beta, and a **heparin**-binding growth factor.

62. The method of claim 60, wherein **modulating** proliferation of an endothelial cell comprises inhibiting proliferation of the endothelial cell.

=> d ibib abs 9

L52 ANSWER 9 OF 14 USPATFULL

ACCESSION NUMBER:	1998:115708 USPATFULL		
TITLE:	Heparin binding mitogen with homology to epidermal growth factor (EGF)		
INVENTOR(S):	Klagsbrun, Michael, Newton, MA, United States Abraham, Judith A., San Jose, CA, United States Higashiyama, Shigeki, Osaka, Japan Besner, Gail E., Buffalo, NY, United States		
PATENT ASSIGNEE(S):	The Childrens Medical Center Corp., Boston, MA, United States (U.S. corporation) Scios Nova, Inc., Mountain View, CA, United States (U.S. corporation)		
	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5811393		19980922
APPLICATION INFO.:	US 1993-39364		19930615 (8)
	WO 1991-US7691		19911016
			19930615 PCT 371 date
			19930615 PCT 102(e) date
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1990-598082, filed on 16 Oct 1990, now abandoned		
DOCUMENT TYPE:	Utility		
FILE SEGMENT:	Granted		
PRIMARY EXAMINER:	Allen, Marianne P.		
LEGAL REPRESENTATIVE:	Fish & Richardson P.C.		
NUMBER OF CLAIMS:	24		
EXEMPLARY CLAIM:	1		
NUMBER OF DRAWINGS:	5 Drawing Figure(s); 5 Drawing Page(s)		
LINE COUNT:	1650		

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed are **heparin** binding mitogens which include an epidermal growth factor-homologous segment (HB-EHM). These factors stimulate proliferation of **fibroblast** cells, epithelial cells, and smooth muscle cells, but not endothelial cells. Also disclosed are isolated antibodies that recognize, and purified nucleic acids that encode, the above growth factors as well as isolated polypeptides, vectors containing such nucleic acids, and cells harboring such vectors. Growth factors of this invention may be used for accelerating the rate of wound healing, for the in vitro culture of HB-EHM-responsive cells, and for the identification of antagonists to HB-EHM.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d ibib abs 10

L52 ANSWER 10 OF 14 USPATFULL

ACCESSION NUMBER:	97:73601 USPATFULL
TITLE:	Compositions for inhibiting restenosis
INVENTOR(S):	Weisz, Paul B., State College, PA, United States
PATENT ASSIGNEE(S):	The Trustees of the University of Pennsylvania, Philadephia, PA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5658894		19970819
APPLICATION INFO.:	US 1994-345011		19941123 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1992-900592, filed on 18 Jun 1992, now abandoned And a continuation-in-part of Ser. No. US 1991-790320, filed on 12 Nov 1991, now abandoned which is a continuation-in-part of Ser. No. US 1991-691168, filed on 24 Apr 1991, now abandoned which is a continuation of Ser. No. US 1989-397559, filed on 23 Aug 1989, now abandoned , said Ser. No. US -900592 which is a continuation-in-part of Ser. No. US 1990-480407, filed on 15 Feb 1990, now patented, Pat. No. US 5183809, issued on 2 Feb 1993

DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Wityshyn, Michael G.
ASSISTANT EXAMINER:	Prats, Francisco C.
LEGAL REPRESENTATIVE:	Panitch Schwarze Jacobs & Nadel, P.C.
NUMBER OF CLAIMS:	14
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	6 Drawing Figure(s); 5 Drawing Page(s)
LINE COUNT:	1449

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Polyionic derivatives of cyclodextrins and methods for preparing these derivatives are provided in which a polyionic derivative of cyclodextrin is combined with a growth factor, preferably a heparin binding growth factor. These compositions are of low solubility and are applied directly to the location of a wound. By virtue of the low solubility, the compositions remain in place at the site of application and slowly release growth factor. In an alternative embodiment, the cyclodextrin derivatives are administered in the absence of growth factor and are used to absorb growth factor present in the body at the location of the wound in order to prevent overstimulation of the wound response.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d kwic 10

L52 ANSWER 10 OF 14 USPATFULL

DETD . . . thus be introduced at or near the sites of tissue damage or sites of implantation, or applied externally as wound **dressings** , etc. In such embodiments, the compositions and compounds of the present invention are preferably combined with a solid carrier which. . .

DETD . . . and/or are combined with biologically active proteins. According to preferred embodiments, the biologically active protein exhibits a specific affinity for **heparin**, and, more specifically, is **heparin**-binding growth factor, i.e., a class

of growth factors, many of which are mitogenic for endothelial cells. An example of such a growth factor is basic **fibroblast** growth factor. Generally it will be the **heparin**-binding growth factor proteins, commonly referred to as HBGF's, which may be combined with the saccharide derivatives of the present invention.. . .

DETD . . . shift resulting from heparin binding on the dye has been used to identify active heparin-like compounds having the capability of **modulating** angiogenesis. Such dye complexing of the active protein also is similarly resistant to salt concentration as is the complexing to. . .

DETD . . . example of a flat polymer product of polyamide polymer, manufactured by 3M Corporation, and used as a bio-compatible patch or **dressing** on wounds. This biocompatible patch or **dressing** is designed to physically protect a wound from invasion of pathogens, and yet to have sufficient porosity to allow passage. . . or already present in biomembranes. Biological membranes such as omentum and amnion are well known in the art as wound **dressings**. Collagen based synthetic biomembranes are being used in the treatment of burns. The presence of derivatized saccharide of the present. . .

DETD . . . J. Biol. Chem. 193: 265-275). Protein concentrations of the pure growth factor were estimated by comparing the intensities of silver-stained **polypeptide** bands of SDS-polyacrylamide **gel** to those of the molecular weight markers.

DETD . . . NaCl, about 230 units of the activity was recovered when eluted with about 2M NaCl. These results indicate that basic **fibroblast** growth factor has a very strong affinity for beta-cyclodextrin tetradecasulfate and is at least comparable to that of FGF for **heparin**. The activity peak was analyzed by SDS polyacrylamide gel electrophoresis followed by a silver stain. Lane 2 in FIG. 4 shows the polypeptide band of basic **fibroblast** growth factor.

CLM What is claimed is:

7. The composition of claim 6 wherein the **heparin** binding growth factor is **fibroblast** growth factor.

=> d ibib abs kwic 11

L52 ANSWER 11 OF 14 USPATFULL

ACCESSION NUMBER:	93:74208 USPATFULL
TITLE:	Polypeptides for adhering cells to a substrate
INVENTOR(S):	Tsilibary, Effie C., Minneapolis, MN, United States Furcht, Leo T., Minneapolis, MN, United States
PATENT ASSIGNEE(S):	Regents of the University of Minnesota, Minneapolis, MN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5242826		19930907
APPLICATION INFO.:	US 1991-705086		19910524 (7)

DISCLAIMER DATE:	20061024
RELATED APPLN. INFO.:	Division of Ser. No. US 1991-648190, filed on 31 Jan 1991, now patented, Pat. No. US 5059425 which is a division of Ser. No. US 1989-397012, filed on 22 Aug 1989, now patented, Pat. No. US 5007925 which is a division of Ser. No. US 1987-106858, filed on 8 Oct 1987, now patented, Pat. No. US 4876332
DOCUMENT TYPE:	Utility
FILE SEGMENT:	Granted
PRIMARY EXAMINER:	Naff, David M.
LEGAL REPRESENTATIVE:	Merchant, Gould, Smith, Edell, Welter & Schmidt
NUMBER OF CLAIMS:	5
EXEMPLARY CLAIM:	1
NUMBER OF DRAWINGS:	24 Drawing Figure(s); 12 Drawing Page(s)
LINE COUNT:	618

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A polypeptide which can bind heparin and promote cellular adhesion is provided, which consists essentially of a polypeptide having a formula selected from the group consisting of:

met-phe-lys-lys-pro-thr-pro-ser-thr-leu-lys-ala-gly-glu-leu-arg,

thr-ala-gly-ser-cys-leu-arg-lys-phe-ser-thr met,

asn-pro-leu-cys-pro-pro-gly-thr-lys-ile-leu,

and mixtures thereof.

Medical devices such as prosthetic implants, percutaneous devices, **bandages** and cell culture substrates coated with the polypeptide composition are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Medical devices such as prosthetic implants, percutaneous devices, **bandages** and cell culture substrates coated with the polypeptide composition are also provided.

DETD Lyophilized crude polypeptides are purified by preparative high performance liquid chromatography (HPLC) by **reverse** phase technique on a C-18 column. A typical elution gradient is 0% to 60% acetonitrile with 0.1% TFA in H.sub.2. . .

DETD In summary, peptide TS-1 promotes adhesion of aortic endothelial cells, metastatic carcinoma M.sub.4 cells, normal rat **fibroblasts**, MM fibrosarcoma cells, C6 glioma cells and A431 breast carcinoma cells. Peptide TS-2 binds (a) to type IV collagen, (b) to **heparin** and (c) promotes adhesion of the above-mentioned cell lines. Peptide TS-3

(a) binds to **heparin** and (b) promotes adhesion of the above-mentioned cell lines.

DETD . . . in particular may be strongly attracted to the present polypeptides. The latter point indicates the potential usefulness of these defined **polypeptides** in **coating** a patch graft or the like for aiding wound closure and healing following an accident or surgery.

DETD . . . used to coat the surface of medical devices intended for external application of attachment to the body. Such devices include " **bandages**", which term is also intended to refer to wound packs and **dressings**, which can comprise surfaces formed from absorbent cellulosic fibers, from synthetic fibers or from mixtures thereof. These surfaces can be. . .

=> d ibib abs kwic 12

L52 ANSWER 12 OF 14 USPATFULL
ACCESSION NUMBER: 91:86566 USPATFULL
TITLE: **Bandage** comprising a fibrous surface coated with polypeptides with type IV collagen activity
INVENTOR(S): Tsilibary, Effie C., Minneapolis, MN, United States
Furcht, Leo T., Minneapolis, MN, United States
PATENT ASSIGNEE(S): Regents of the University of Minnesota, Minneapolis, MN, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 5059425		19911022
APPLICATION INFO.:	US 1991-648190		19910131 (7)

RELATED APPLN. INFO.: Division of Ser. No. US 1989-397012, filed on 22 Aug 1989, now patented, Pat. No. US 5007925 which is a division of Ser. No. US 1987-106858, filed on 8 Oct 1987, now patented, Pat. No. US 4876332
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Lee, Mary C.
ASSISTANT EXAMINER: Ambrose, Michael G.
LEGAL REPRESENTATIVE: Merchant, Gould, Smith, Edell, Welter & Schmidt
NUMBER OF CLAIMS: 2
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 21 Drawing Figure(s); 12 Drawing Page(s)
LINE COUNT: 613
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A composition which can bind heparin and promote cellular adhesion is provided which consists essentially of a polypeptide of the formula:

met-phe-lys-lys-pro-thr-pro-ser-thr-leu-lys-ala-gly-glu-leu-arg,

thr-ala-gly-ser-cys-leu-arg-lys-phe-ser-thr-met,

asn-pro-leu-cys-pro-pro-gly-thr-lys-ile-leu,

or mixtures thereof.

Medical devices such as prosthetic implants, percutaneous devices, **bandages** and cell culture substrates coated with the polypeptide composition are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
TI **Bandage** comprising a fibrous surface coated with polypeptides with type IV collagen activity
AB Medical devices such as prosthetic implants, percutaneous devices, **bandages** and cell culture substrates coated with the polypeptide composition are also provided.
DETD Lyophilized crude polypeptides are purified by preparative high performance liquid chromatography (HPLC) by **reverse** phase technique on a C-18 column. A typical elution gradient is 0% to 60% acetonitrile with 0.1% TFA in H.sub.2. . .
DETD In summary, peptide TS-1 promotes adhesion of aortic endothelial cells, metastatic carcinoma M.sub.4 cells, normal rat **fibroblasts**, MM fibrosarcoma cells, C6 glioma cells and A431 breast carcinoma cells. Peptide TS-2 binds (a) to type IV collagen, (b) to **heparin** and (c) promotes adhesion of the above-mentioned cell lines. Peptide TS-3

(a) binds to **heparin** and (b) promotes adhesion of the above-mentioned cell lines.

DETD . . . in particular may be strongly attracted to the present polypeptides. The latter point indicates the potential usefulness of these defined **polypeptides** in **coating** a patch graft or the like for aiding wound closure and healing following an accident or surgery.

DETD . . . used to coat the surface of medical devices intended for external application or attachment to the body. Such devices include " **bandages**", which term is also intended to refer to wound packs and **dressings**, which can comprise surfaces formed from absorbent cellulosic fibers, from synthetic fibers or from mixtures thereof. These surfaces can be. . .

CLM What is claimed is:

1. A **bandage** comprising a fibrous surface coated with a polypeptide consisting essentially of: met-phe-lys-lys-pro-thr-pro-ser-thr-leu-lys-ala-gly-glu-leu-arg, thr-ala-gly-ser-cys-leu-arg-lys-phe-ser-thr-met, asn-pro-leu-cys-pro-pro-gly-thr-lys-ile-leu, or mixtures thereof.

2. The **bandage** of claim 1 wherein the fibrous surface comprises cellulosic fibers.